

California Energy Commission

Public Benefits Program

Public Goods Charge

Energy Efficiency Program Report

Operational Plan Report and Transitional Plan Report

Staff Draft – November 8, 1999



EFFICIENCY

Energy for the Future

**California Energy Commission
Public Benefits Program**

**Public Goods Charge Energy Efficiency Program Report -
Operational Plan Report and Transitional Plan Report
Staff Draft
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This paper is the first draft of a report to the Legislature, written in support of the mandate contained in Assembly Bill 1105. This bill directed the California Energy Commission to conduct a public process and prepare and submit a transition plan report and an operational plan report regarding the transfer of energy efficiency programs, currently funded by a public goods charge, from the California Public Utilities Commission to the California Energy Commission. The final report is due to the Legislature by January 1, 2000.

The paper summarizes Energy Commission staff's key recommendations for future program direction, funding levels, and administrative structure. The proposed recommendations will be discussed at the next Efficiency Committee hearing, scheduled on November 16, 1999. Participants are encouraged to comment on the report and make suggestions for the Committee's consideration prior to the paper being finalized in early December, 1999.

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Introduction

Legislative Direction — AB 1105

In July, 1999, the California Legislature passed Assembly Bill (AB) 1105 (1999 Stats., Chapter 67). The bill directs the California Energy Commission (Energy Commission) to conduct a public process and to prepare and submit to the Legislature by January 1, 2000, a transition plan report and an operational plan report regarding transferring energy efficiency programs, currently funded by a public goods charge, from the California Public Utilities Commission (CPUC) to the Energy Commission.

The Transition Plan Report is required to address a number of transition issues concerning transferring oversight of the Public Goods Charge (PGC) program from the CPUC to the Energy Commission. The legislation identifies the transition period as January 1, 2000, to December 31, 2001.

The Operational Plan Report is required to address the post transition administrative structure designed to achieve efficient and effective program administration beginning on January 1, 2002.

In addition to AB 1105, the Governor's Budget Change Proposal directs the Energy Commission to provide for an independent review to consider whether there is a need for the programs currently funded by the public good charge.

A Brief History of Utility Energy Efficiency Programs in California

The Oil Embargo of 1973 and OPEC control of the petroleum market brought about an abrupt rise in electricity prices in the mid-1970s that jolted and angered consumers who had gotten used to low energy bills and decades of falling electricity prices. California's investor-owned utilities (IOUs) began offering energy efficiency programs in the late 1970s in response to customer complaints about these high electricity bills.

Early utility efficiency programs focused on providing residential customers with energy efficiency options and with tips to reduce their bills. These early programs were known as conservation programs. They offered suggestions such as turning off the lights in unoccupied rooms and turning down the thermostat in winter and putting on a sweater. In the early 1980s, energy conservation programs were giving way to what was to be called demand-side management programs. The term demand-side management (DSM) was invented by the Electric Power Research Institute in mid-1983 to describe a broad

range of programmatic efforts by utilities to shape total customer demand to better match system generating requirements and system costs.

DSM programs gave utilities a new tool to improve system performance. Utilities could now both reduce or build load, depending on the DSM program and their performance goals. In California, IOUs used four different types of DSM programs: 1) energy efficiency programs, 2) load management programs, 3) fuel substitution programs, and 4) load building programs. Seventy-five to ninety percent of all DSM spending went to efficiency programs.

As DSM concepts and programs grew in popularity, statewide utility spending grew from \$100 million a year in 1980 to \$230 million in 1984. However, the fall of oil and gas prices in 1985 triggered a downturn in program funding. In 1989, total DSM funding dipped below \$100 million a year. Energy efficiency programs seemed to be in trouble.

In the early 1990 s, a group of government, utility, and public interest groups met to discuss ways to rekindle utility interest in DSM and to encourage utility management to promote energy efficiency. The group was called the California Collaborative . They came up with the notion of paying utilities for every measured BTU (or KWh) saved. The PUC authorized the utilities to collect ratepayer funds to buy what was now called conservation resources . As a result, the utilities once again found energy efficiency programs profitable and initiated massive energy efficiency programs statewide. The funding for those programs rose to \$500 million a year in 1994. The utility energy efficiency programs were now resource acquisition programs programs that purchased energy efficiency when it was less expensive than building new power plants.

But all this changed in the mid-1990 s with the uncertainty that developed around utility restructuring. Energy program funding once again declined. In addition, researchers were raising concerns that trends in funding for utility DSM programs were not linked to sustainable changes in the marketplace. For example, a utility rebate program for the purchase of an energy efficient air conditioner would improve sales of efficient air conditioners only so long as rebates were offered. When rebates were stopped, sales lagged.

In February, 1997, the CPUC, directed by AB 1890, issued Decision 97-02-014 to create a new structure to implement public purpose energy efficiency programs under a restructured utility industry. The CPUCs stated that its goal for energy efficiency programs had changed from trying to influence utility decision makers to trying to transform the market so that individual customers and suppliers would make rational energy services choices. The PUC appointed an independent advisory board, now called the California Board for Energy Efficiency (CBEE), to develop this market transformation approach to program funding. The CBEE/CPUC started a process of developing independent administrators but never completed it. Although the CPUC s objective is to move administration away from the utilities, the utilities are designated to remain in place as program administrators through 2001.

In July, 1999, the Governor signed AB 1105, which instructed the Energy Commission to prepare a report to discuss issues related to transferring the responsibilities set forth in AB 1890 from the CPUC to the Energy Commission.

The Public Goods Energy Efficiency Program Beyond 2001

The Energy Commission staff believes there is a need to continue the Public Goods Energy Efficiency Program (the Program) beyond 2001. Staff provides a full discussion of the rationale for this recommendation in the Program Funding section of the Operational Plan Report.

Briefly, staff believes that there are four reasons why Program funding should be continued. First, current energy efficiency programs are yielding significant energy and dollar savings for California's electricity consumers, and most will continue to do so beyond 2001. Second, the new construction market, the small commercial market, and the residential market are, for the most part, under-served by current utility programs. While utility programs exist in all these areas, significant barriers still exist for adopting energy efficiency. Third, data from a variety of Energy Commission forecasting models indicate that there are ample opportunities for cost-effective energy efficiency beyond 2001. These additional potential savings would result from continued funding of the Program and go beyond what market forces and building and appliance standards could accomplish alone.

Finally there is deregulation, or the restructuring of the electricity industry. Staff believes we can expect several changes as a result of deregulation that will improve the attractiveness of energy efficiency. First, reliability problems and potential brownouts are forecasted by the Energy Commission and the North American Reliability Council. These forecasts are based, at least in part, on uncertainties created by restructuring, such as who will be responsible for reliability and who will build the power plants and transmission lines to meet expected demand. If such a forecast comes to pass, there may be an important role for targeted energy efficiency programs to reduce load in key congested geographical areas. Second, electricity prices in the Power Exchange market will remain complex and volatile. Since it is not clear at this time how these changing price signals will affect different customer classes, a consumer's best hedge against high peak prices may well be to invest in energy efficiency equipment and controls that give them the capability to control their bills and reduce electricity use.

The Energy Commission's Goals for The PGC Program

California has been a leader in the nation in promoting energy efficiency, both through public agency programs such as the California building and appliance standards, and through energy efficiency programs run by the state's utilities under the direction of CPUC and now the CPUC/CBEE. The goal of the Energy Commission is to maintain that leadership role for the state. The Energy Commission is committed to increasing the level of cost-effective energy efficiency savings throughout California in all sectors of the economy. The Energy Commission has broad mandates to ensure environmental quality

and to promote technological innovation that benefits the public. The Energy Commission staff believes that cost-effective energy efficiency is consistent with those mandates.

More specifically, the Energy Commission staff believes the PGC Program needs to provide energy efficiency programs for all residential customers, give local governments an opportunity to provide regionally specific cost-effective energy programs, promote a vibrant private sector that can provide energy efficient goods and services at the lowest possible price and with the highest possible quality to consumers, build on the successful track record of existing energy efficiency programs, and continue the effort to provide consistent program design for certain statewide programs.

The Energy Commission staff believes energy efficiency programs give consumers a way to control their bills, make their living environment more comfortable, improve productivity in the workplace, increase learning in schools, and help insure that future generations can enjoy the same standard of living, or a better standard of living, that exists today.

Organization of the Report

In keeping with the language of AB 1105, The Public Goods Charge Report is actually two reports, a Transitional Plan Report and an Operational Plan Report. The staff has reversed the order of the reports from the order appearing in AB 1105, with the operational report preceding the transition report. It seemed logical to first discuss the proposed post-2001 administrative structure, programs, and funding (the Operational Plan Report) and then describe what has to be done in the transition period, from January 1, 2000 to December 31, 2001, to get there (The Transition Plan Report).

In arranging the PGC Report in this manner, the staff has taken the liberty to move Sec. 44 (a) (4), Program requirements necessary to ensure that current programs apply market transformation principles from the Transition Plan Report to the Operational Plan Report.

The staff has also included detail on oversight responsibility, called for in the Transition Plan Report, in the Operational Plan Report as well.

Other than these changes, the staff has attempted to organize the Report along the lines of AB 1105.

The Public Process

The Energy Commission has complied with Sec. 44 (a) of AB 1105 calling for a public process to prepare the Report. The Commission has held three publically noticed Committee Workshops: August 23, 1999; September 9, 1999; and October 12, 1999. The first workshop gave participants a chance to comment on the scope of the Report and

present issues they believed the Energy Commission needed to address in the Report. The second workshop focused on program goals; the third, on administrative structure.

In addition, the staff held a Staff Workshop on October 1, 1999 to discuss issues pertaining to the administrative structure after 2001.

The Energy Commission has also scheduled a Committee Hearing on this Draft Report for November 16, 1999, and a Energy Commission adoption hearing on December 15, 1999.

Summary of Staff Recommendations

The following is a summary of all staff recommendations in the Staff Draft Report.

Need for the Program and Funding Levels

- Abundant opportunities remain for increases in cost-effective energy efficiency
- Significant net public benefit would result from continuing PGC energy efficiency programs
- A total funding level of \$294 million per year beginning in 2002 should be allocated
- The Energy Commission should advocate a natural gas surcharge to fund energy efficiency
- The publicly owned utilities (municipal utilities) should voluntarily report the annual spending and benefits of all public goods programs to the Energy Commission

Post-Transition Administrative Structure

- The governance function should be assigned to the Energy Commission
- A new non-profit should not be created to administer the Program
- The UDC s should initially manage the Residential, New Construction, and Targeted Reliability/Demand Responsiveness programs. After 2003, these areas can be opened to competitive bid
- The UDC s should not be eligible to bid to become managers in the Nonresidential and Innovative programs
- All entities, other than the governing entity, should be eligible to be implementer of programs
- There should be an independent review of the entire PGC Program

Program Goals and Program Design

- The market transformation programs will consist of market-focused portfolios of programs collectively aimed at specific market sector objectives
- A theory based approach will be used to develop program portfolios
- The PGC Program will emphasize the use of pilot initiatives
- The programs should enhance system reliability and increase the ability of consumers to reduce their use when electricity cost is high
- There should be evaluation feedback at all levels
- Success will be measured by the increased number of successful private businesses that provide energy efficient products and services, and the increase in the number of customers that exercise informed choice for these goods

Transition Issues

- The Energy Commission should develop a strategic plan and evaluation guidelines
- Enabling legislation is needed to transfer the program, provide appropriate administrative flexibility, and establish an independent auditing and program oversight function
- In Fiscal Year 00-01, the Energy Commission will need \$200,000 to \$300,000 for technical service support contracts. The Energy Commission will also need about 12 positions to provide planning, administrative, legal and contract development assistance
- The Energy Commission will need an additional 15 positions beginning in Fiscal Year 01-02

I. Operational Plan Report

The Operation Plan Report has three purposes: 1) to describe the current crop of CBEE directed efficiency programs and to explain how those programs might be redesigned in the future in light of the electric utility industry restructuring, 2) to recommend how much money should be spent on energy efficiency programs after 2001, and 3) to describe how these programs will be managed after 2001, or in the language of AB 1105, to recommend a post-transition administrative structure.

A. Program Design

AB 1105 calls for the Energy Commission to consider a number of topics related to program design. Both Sec. 44 (a)(4) and Sec. 44(b)(1) in AB 1105 directly mention the term market transformation. These two sections require the Energy Commission to consider, respectively, [p]rogram requirements necessary to ensure that current (staff emphasis) programs apply market transformation principles and result in sustainable, cost-beneficial improvements in California's energy markets and to consider [t]he application of market transformation principles to achieve cost-effective energy efficiency and conservation (beyond 2001) through sustainable, cost-beneficial improvements in California's energy markets.

In addition, Sec. 44(b)(3) and Sec. 44(b)(8) of AB 1105 requires the Energy Commission to consider energy efficiency [p]rograms that result in sustainable improvements in the information environment, market rules, and other aspects of market structures and to consider [p]rograms in existing residential and nonresidential program areas that reduce consumer energy bills while stimulating the growth of a competitive industry providing cost-effective products and services

1. Overview of Current Energy Efficiency Programs

In a presentation to the Energy Commission at a October 6, 1999 Business Meeting, a utility representative brought home the point that the energy efficiency PGC Program is a massive undertaking. The representative stated that there is currently \$254 million allocated to nearly 190 individual energy efficiency programs managed across four utilities (PG&E, SCE, SDG&E, SoCalGas), and that there are over 350 people managing these programs. Of these 190 programs, some are quite small and local while others command the lion's share of the funding money or are managed on a statewide basis.

Even though some of these programs have been going on for more than a decade, the design of all these programs, the old ones and the new ones, was affected by SB 1890, the utility restructuring legislation that led to the creation of CBEE.

In the CPUC's Adopted Policy Rules for Energy Efficiency Activities, the CPUC's guiding principles to the CBEE, Policy Objective II-4 states that [t]he mission of the PGC-funded programs is to transform markets and ultimately privatize the provision of cost-effective energy efficient products and services

The term market transformation has proved somewhat elusive. A 1999 report by the Energy Center of Wisconsin called *A Discussion and Critique of Market Transformation* found, after interviewing nearly a dozen experts in the field, that there was no commonly held definition of the term. Participants in the public process leading up to this Draft Report have also expressed different views on what constitutes market transformation. In general, market transformation is essentially a marketing strategy to improve the efficiency of electricity use by encouraging consumers, businesses, and manufacturers to purchase, use, or produce energy efficiency products because the market demands those products, not because there is some subsidy or rebate that provides a short term incentive to purchase or produce energy efficiency products or services.

Since transforming markets takes time (sometimes a long time, with 10 years not being uncommon), the effects of market transformation strategies are often difficult to measure. In that respect, market transforming strategies stand in stark contrast to an earlier vintage of energy efficiency actions, the so called resource acquisition program. Resource acquisition programs tend to be short term actions designed to achieve specific measurable energy savings results.

When the CPUC shifted from resource acquisition to market transformation as justification for energy efficiency spending, it created a need for major changes in program design, implementation, and evaluation, and energy efficiency programs have been moving in this direction. This evolution toward programs expected to have long term sustainable energy savings provides lessons for future PGC program management. After a brief description of current programs, this section discusses the progress made and lessons to be learned.

Each utility administers programs in three major sectors: residential, nonresidential, and new construction. The programs in each sector include numerous *program elements* (i.e., Residential Contractor Program, Time-of-Sale Home Inspection Energy Awareness) targeted at influencing energy efficiency-related behavior in a specific market (i.e., Residential Retrofit and Renovation). Some program elements are managed by the utilities, while other elements are bid out to third parties, who implement their own program design. In addition to each utilities market program elements, the utilities have increased the use of statewide programs and are proposing to further expand them in 2000 to include programs in nonresidential new construction, codes and standards support, crosscutting emerging technologies, and energy center activities. While some program elements address commercialization of emerging technologies, the utilities are now proposing creation of an Emerging Technologies Coordinating Council to better coordinate emerging technology strategies.

2. Progress Towards Sustainable Market Transformation under the CPUC

According to the CPUC's policy objectives all PGC programs are to be market transforming. Market transformation programs are to be designed to create *sustainable* changes in the marketplace by promoting changes in market rules, information environment, and market participant behavior. To demonstrate this, the CPUC requires that every program plan include a theory of how the program will lead to the desired market effects.

Utility energy efficiency programs, however, were historically designed to achieve short-term energy savings not long-term market effects. The resource acquisition paradigm treated efficiency as a cost-effective alternative to constructing new power plants. The types of program strategies under the two approaches, resource acquisition and market transformation, are typically different. Resource acquisition programs created energy savings using methods such as financial incentives which may not result in future demands for energy efficiency once the incentives are removed. Market transformation programs, on the other hand, take longer to achieve results but are designed, often through information and technology promotion, to create a permanent, largely unsubsidized, increase in demand for energy efficiency.

The distinction between the two approaches is illustrated by a study sponsored by the California Demand Side Measurement Advisory Committee that reviewed recent evaluations of 13 resource acquisition-era programs that were conducted between 1989 and 1997. The authors found convincing evidence for significant market transformation in only one area, commercial lighting, although other programs did exhibit some market effects.¹ For example, while residential new construction programs had some effect on homebuyers and builders awareness of energy efficiency measures, the authors found no evidence that these changes would have a lasting impact on behavior. Because these programs were not originally designed to achieve sustainable market effects, it illustrates the importance of re-evaluating and redesigning preexisting programs, if they are now intended to achieve sustainable improvements in energy efficiency market activity.

While the utilities have made at least some changes to most programs, some continue to emphasize resource-acquisition era strategies which appear unlikely to have sustainable benefits despite the after-the-fact development of a theory of sustainable change. For example, many of the nonresidential program elements still rely heavily on rebates, such as the \$68 million Standard Performance Contract (SPC) program and Express Efficiency. Other programs use traditional delivery strategies but are applying them in different ways. In some residential and nonresidential programs consumer rebates are used, but the utilities also offer rebates upstream to manufacturers and distributors. Whether these strategies combined will achieve the sustainable benefits that consumer rebates alone have not achieved remains to be seen.

Where program designs were new or substantially modified from what existed pre-restructuring, the utilities program plans tell a much more compelling story about how sustainable market improvements will be effected. While it is too soon to judge their ultimate success, some of these pilots are showing positive early results, such as SCE's pilot HVAC Diagnostic Program and the single family element of the statewide Residential Contractor Program.² For example, some HVAC contractors, surprised at the amount of duct leakage detected or systems not operating properly, have begun marketing the benefits of the duct test and diagnostics to their customers. Some contractors are also leveraging the program to promote annual maintenance of air conditioning systems.

¹ Market Effects Summary Study, Research Into Action, Inc., Pacific Consulting Services, Megdal & Associates, December 15, 1998.

² Southern California Edison, 1999 Energy Efficiency Programs Third Quarter Report, October 14, 1999.

Thus far only two independent evaluations for 1998 programs have been published. They are discussed below in order to provide early indications of the ability of current programs to achieve the CPUC's policy goals.

The Nonresidential Standard Performance Contract Program

This program comprises the primary strategy for pursuing market transformation in six separately defined nonresidential energy efficiency markets, representing 50 percent of the total 1999 nonresidential program budget. Because this program evolved from pre-existing demand-side bidding programs, it has tried to be both a resource acquisition and a market transformation program. The program design has not changed substantively and relies on fixed payments. Although involved parties have not been able to agree on program goals, the underlying theory is that use of performance contracts will build relationships between energy efficiency service providers and their customers which will lead to an increased demand for energy efficiency services.

In June 1999 an evaluation was completed of the first year of program operation.³ Although still early in the program, the evaluation team found weak evidence that the program as designed in 1998 would lead to the desired market transformation and recommended substantial redesign. The evaluators found that the performance contract mechanism is already well established among large customers and a high percentage of customers are free riders that would have made the investment without the program incentives. The current program is tailored to the large commercial segment of the market, where short-term savings seem easiest to obtain, leading to the neglect of the small commercial segments where the potential for market transformation is higher.

For the year 2000, extensive discussions have taken place on how to modify the SPC program but agreement on changes has been difficult for several reasons. First, the emphasis on having a consistent statewide program makes achieving consensus difficult and limits the ability to experiment on a small scale. Second, because this program is such a large component of the entire CBEE portfolio, measuring energy savings is critical to measuring overall portfolio cost-effectiveness, leading to an emphasis on measurement consistent with CPUC rules. Finally, because the program is so large, making significant changes creates a tradeoff between having an effective program and disrupting the industry.

Third Party Initiatives

The goal of the Third Party Initiative (TPI) component is to accelerate market transformation by stimulating the development of diverse energy efficiency program offerings. Each administrator issues targeted solicitations based on its predetermined program needs. By providing funding for market participants' own program designs, the PGC portfolio can be expanded to include a broader range of innovative service concepts that complement the administrator's program offerings.

³ Evaluation Of The 1998 Nonresidential Standard Performance Contract Program, XENERGY, June 18, 1999.

An evaluation of the TPI program found that it has been relatively successful in attracting unique, innovative programs. While not all of the 13 projects studied are likely to succeed, they all found a market niche that had not been addressed by other programs or market actors. The report also made numerous worthwhile recommendations for improvement, such as making market research and existing program descriptions more widely available to bidders, and broadening the pool of potential bidders beyond the usual players, a number of which have been adopted.⁴

They also found that more market research studies would be valuable in identifying entrepreneurial opportunities both within and outside of the TPI program, reducing market uncertainty, aiding determination of which projects are innovative and have potential to be effective, and also in assisting the administrators in developing their own programs by providing clear focus on market transformation opportunities. Another limitation of the current approach is the reliance on targeted solicitations means that, wholly new ideas may not have an entry point. Greater development of market research studies could offset this limitation, as could the use of broader solicitations.

3. Lessons Learned from the CPUCs PGC Energy Efficiency Program

While some progress has been made toward applying the market transformation approach to energy efficiency programs, several key lessons are apparent from the efforts of the CPUC and CBEE to date:

- The guidelines and objectives for market transformation versus resource acquisition programs must be clearly delineated. While some innovation in program designs has occurred, many program designs try to mix these two different program styles.
- More funding of market characterization research and program evaluations is needed to provide a stronger foundation for program design and lead to more effective use of PGC funds.
- Clear program explanations for how the program is expected to lead to desired market effects are needed to resolve program design issues. These explanations should guide program design, not be made to fit a preexisting design after the fact.
- Approving large statewide budgets for programs without testing and refining them on a pilot scale, as happened with the SPC, results in high risk of ineffective use of PGC funds.
- Creating an innovative portfolio of programs with a high likelihood of transforming markets will require greater use of pilots, third party programs, and local government initiatives. A CBEE funded report identified numerous strategies to better promote innovation, such as a two-stage solicitation process, use of expert panels, a communications and outreach plan, and the use of non-traditional program area definitions.⁵ In developing an expanded pilot initiative program, the Energy Commission should explore alternative administrative structures that incorporate these ideas.
- Current portfolio management as defined by CBEE does not address issues of risk. Another recommendation by the Encouraging Innovation report cited above is to include

⁴ Evaluation of the Third Party Initiative Program, Quantum Consulting, May 20, 1999.

⁵ Encouraging Innovation in the Third Party Initiative Program, Wirtshafter, Bordner, and Baxter, April 13, 1999.

both more traditional projects as well as a few high-risk/high reward projects. At the same time the programs must be shaped by a clear sense of strategy; being overly broad (i.e., each administrator trying to cover too many market sectors) is a recipe for ineffectiveness.⁶

- Achievement of CPUC policy goals appears to be hindered by the fact that the advisory nature of the CBEE limits its ability to direct the utilities to make policy-fulfilling program changes.
- More effective performance incentives should be developed to motivate administrators to achieve the specific end-results that are desired. This will enable the transfer of more responsibility and freedom to innovate to the administrators and their portfolio managers. To do this, operational definitions of market transformation and the desired end-results are needed by administrators.

While the CPUC has had success in initiating California's PGC Energy Efficiency Program, progress towards fulfilling the CPUC's goals and policy objectives could be accelerated. Enhanced efforts are needed in particular in program design, implementation and evaluation. In the next section the Energy Commission will offer recommendations for goals which expand beyond the CPUC's goal and policy objectives. Program implementation principles that build on these lessons are proposed in a later section.

4. Energy Commission Goals for The Post-Transition Programs

Staff recommends that the California Energy Commission's PGC Energy Efficiency Program be dedicated to the overarching goal of cost beneficial energy efficiency in the marketplace. The purpose of pursuing this goal is to capture long and short term societal benefits: reduced societal costs of energy, increased economic growth, improved environmental quality, enhanced quality of life, and improved reliability of the electric system.

This goal is consistent with the CPUC's Board for Energy Efficiency (CBEE) in the Proposed Modifications of the Adopted Policy Rules for Energy Efficiency Activities (May 12, 1999). Staff recommends that the Energy Commission expand upon the CPUC's goal and policy objectives by recommending the following: 1) Inclusion of electric system reliability as a significant public benefit to be pursued in the PGC Energy Efficiency Program; and 2) Inclusion of PGC programs which help customers to adjust electric usage in response to pricing differences.

To implement the overarching goal and these recommendations the Energy Commission should strive to achieve more specific goals.

⁶ Wirtshafter, Bordner, Baxter, p.20.

Specific Goals

1. *Foster a Sustainable Energy Efficiency Market:* The Energy Efficiency Program should promote markets that both supply and demand more energy efficient good and services. Success should be measured by two specific outcomes: an increased number of successful private businesses that choose to provide energy efficient products and services, and an increased number of customers that exercise informed, intelligent choice for these goods. To result in a truly transformed market, these outcomes must be sustainable and occur with the minimum level of well-targeted subsidies.
2. *Improve Electric System Reliability:* Include electric system reliability as a significant public benefit to be pursued in the PGC Energy Efficiency Program. California's future electricity market may suffer short term supply shortages with an increased risk of power outages. For example, California's electric system reliability is challenged by the need for 3 to 4 thousand MW of summer peak savings in years 2000-2004. While supporting electric system reliability is recommended as a significant PGC Program goal, the specific role of the PGC Program in meeting reliability should be determined after considering the cost-effectiveness of multiple contributors to reliability, such as transmission siting, distributed generation, and energy efficiency.
3. *Increase Demand Responsiveness to Energy Prices:* The Program should support activities that increase the ability of consumers to adjust electricity usage in response to changing prices. Currently consumers neither receive price signals nor reduce demand as electric prices climb during periods of high electricity demand, increasing the risk of power outages and resulting in an inefficiently high market price. The current PGC Program administered by the CPUC is focused on annual energy savings and has no programs designed to improve the match between hourly prices and demand. As a result the program misses the benefits of activities that increase electricity system reliability or consumer responsiveness to price.

The Energy Commission has recommended that in its Phase II of the Post Transition Ratemaking Proceeding, the CPUC explore ways to make customers sensitive to market prices, and develop electric rates that would allow them to benefit from load reductions in, or load shifting from, high-priced hours. However, consumers also need to receive this information in a meaningful format and have the means to act on it. In the long term increasing consumer responsiveness through strategies such as time-of-use metering, changes in billing presentation, and smarter technologies will lead to more intelligent choices, a more reliable electricity market, and lower costs for consumers. Other types of demand responsiveness strategies, such as load shedding programs, may also provide short-term reliability benefits.

4. *Promote an Equitable Distribution of PGC Costs and Benefits:* While pursuing the overarching goal, the Energy Commission should insure an equitable distribution of both Program costs and benefits. At present the CPUC collects a PGC surcharge from all customer classes and allocates funding to these customer classes in a manner proportional to their contribution. The Energy Commission staff recommends continuing the current

practice of collecting the PGC surcharge from all customer classes. In turn the Energy Commission could implement the PGC Program in a manner that maximizes the PGC benefits to all ratepayers. In addition, the Energy Commission could consider a variety of criteria including market potential for change, need for transmission and distribution cost avoidance, and customer class contributions in allocating PGC funds.

5. *Continue PGC Inclusion of Natural Gas with Electricity:* The Energy Commission staff recommends continuing equity between natural gas and electric customers. In many California homes and businesses electricity and natural gas efficiencies are intricately related. Under the current PGC Program the CPUC collects for energy efficiency from gas customers under status quo arrangements and the utilities administer gas and electric programs together. To recognize this relationship and to create fuel neutrality the Energy Commission will advocate a natural gas surcharge. This surcharge should include utility core and non-core customers, as well as California gas customers taking service directly from a pipeline.
6. *Place Emphasis on Underserved Markets:* The Energy Commission staff also recommends placing an emphasis on meeting the needs of consumer groups who are not likely to be served by the existing private or regulated markets. The PGC Program will coordinate with existing services in low-income programs and economic development as these programs target an important subset of the underserved market.

Types of Program Strategies

These goals should be pursued with two general program strategies, *sustainability-focused* or *reliability-focused* programs. To achieve longer term goals such as growth in market activity for energy efficiency services, program strategies that focus on achieving *sustainable* benefits are most effective. *Sustainability-focused* programs pursue longer term benefits from improvements in energy markets through changes in the market rules, information environment, and behavior of market participants. *Sustainability-focused* program strategies include information, training, and technology promotion whose impacts are typically measured over years. Some demand responsiveness programs should create sustainable market improvements, such as promotion of interval metering, more informative bills, smart meters, and stimulating private market delivery of energy management systems and smarter technologies that give consumers ways to respond to high prices.

Historically resource acquisition programs pursued energy efficiency as a cost-effective alternative to generation resources. While this role is no longer relevant in the restructured electricity market, short-term, *reliability-focused* programs may have value by alleviating short or mid-term transmission and distribution congestion constraints or reducing peak demand to prevent reliability problems. Programs such as direct installation of more efficient technologies, financial incentives and many load management programs fall into this category. Because their results are more certain in the short-run and are amenable to measurement, *reliability-focused* program strategies should be included in the PGC program mix to address transmission and distribution problems and provide other short or mid-term benefits. Some programs that address demand responsiveness are likely to fit here, such as load shedding and other interruptible

programs. It may also be possible to use rate changes, metering, and information strategies more intensively to increase the probability of the desired load reduction.

The use of either sustainability - or reliability - focused program strategies must be accompanied by a clear articulation of how they will achieve results and fulfill program goals. Staff believes that in order to fulfill these specific goals of its PGC Program, enhancements to the existing PGC guidelines must be instituted through innovative implementation principles.

5. Implementation Principles for the Post-transition PGC Program: Improving Program Performance

To increase the effectiveness of programs funded with PGC funds, staff proposes designing, implementing and evaluating programs according to the following principles. These principles flow from two sources: lessons learned from current CBEE programs and policy goals that emphasize programs with sustainable benefits. The proposed principles build upon current CBEE philosophy and practice, but seek to refine the program planning process by emphasizing four key enhancements:

1. Market-focused portfolio strategy
2. Causal explanations of how and why programs should work
3. Early-rather-than-later evaluation feedback
4. Pilot initiatives as a risk-reducing mechanism

Market-focused Portfolio Strategy

The centerpiece of the proposed approach to achieving cost-effective energy efficiency through market transformation programs is a market-focused portfolio of programs collectively aimed at specific market-sector objectives. Current CBEE practice uses a portfolio approach to meet eight broad policy objectives. The portfolio is balanced by having each program meet one or more of these objectives. The Energy Commission staff believes this approach to portfolio strategy does not address reducing ratepayer risk and is less effective in achieving cost-effective market-focused results. CBEE's broad approach is very different from the focused effort described below.

In California's diverse energy markets, a portfolio combining differing but complementary program strategies may well offer more promise and less risk in achieving the desired public benefits goals of the PGC Program within any given market sector. Portfolio strategy as defined by the Energy Commission works in this way. Each of the three broad market sectors (e.g., residential, nonresidential, and new construction) would contain a number of program portfolios addressing specific objectives. For example, in the residential HVAC market segment, one objective may be to improve the ability of customers to select high quality HVAC service. A portfolio of program strategies for this objective might test training and certification of contractors, advertising to customers, information on duct problems, homeowner self-diagnostic tools, on-site metering before and after service, etc., to see how the different approaches work individually or together. The portfolio might contain a combination of continuing statewide

programs and new pilot projects; it might also include demonstrations of possible technological A/C advances from PIER projects.

Since as many as 80 percent of new private products and services fail after entering the market, public programs are likely to face similar uncertainty. Portfolio strategy recognizes that some programs in any given portfolio will fail and others will improve through evaluation feedback. Some will be modest successes, while others will yield unexpected beneficial changes as market participants learn to innovate and creatively continue to develop newer efficiency products and services unimagined today. All of the program efforts, however, focus on the same set of market objectives and will contribute to building new market knowledge while reducing risk.

Constructing a portfolio to effectively fulfill market-focused objectives requires understanding how a dynamic market actually works, particularly participant networks and relationships, participant behavior, and the influences of the existing market rules, information and incentives. A market-focused portfolio strategy with a group of mutually reinforcing initiatives safeguards the ratepayer against the specific risks of ineffective programs, excessive cost and an incomplete mix of programs within a given market sector. These risks are always highest when markets are poorly understood. The remaining enhancements explain how these risks can be reduced.

Causal Explanation of How and Why Programs Should Work

A second enhancement in the recommended program planning framework is the emphasis on a theory- or logic-based approach for more effective program design. To select the most promising programs and new ideas, program administrators will need an explicit causal explanation. This is a story or theory explaining *how and why* this set of actions is expected to create the desired changes in the target market. Its underlying premise is that just because a program's ultimate outcomes cannot be measured statistically, it does not mean that nothing can be learned about a program's effectiveness. Through a cause—effect logical explanation it is possible to make reasonable judgments about whether the indicators that are detectable in early data will lead to sustainable results in the future.

The theory-based or logic model technique has been used successfully for over twenty years in other, non-energy, areas of public policy, e.g., in public health, social welfare and educational program development. One of the common applications is in comprehensive cross-sector community-based interventions. Current examples include the Pew Charitable Trust's Children's Initiative and the Ford Foundation's Neighborhood and Family Initiative. Recent federal programs, such as the Empowerment Zone and Enterprise Community Initiative, include some parallel features.

Current CBEE program theories overemphasize increased customer awareness as the singular most important means to increase demand for energy efficiency. Building causal explanations as programs are proposed and redesigned would avoid another current CBEE weakness, that is the tendency to fit an explanation to program events after the fact. Lack of an explicit explanation of assumptions going into the Standard Performance Contracting Program led to many of its documented shortcomings.

Early-Rather-Than-Late Evaluation Feedback

The third enhancement centers on determining whether the programs and the market-focused portfolios are succeeding. The logic- model approach accommodates evaluation feedback at all levels, from the earliest proposed initiatives to a complete portfolio of programs. By making underlying program assumptions explicit from the outset, they can be probed and tested for plausibility earlier rather than later. Many ideas are likely to fail this initial reality test thus avoiding waste of public funds on ill-conceived ideas. Others may require refinement and modifications before and after going into the field. The CADMAC *Market Effects Summary Study* cited earlier calls for specific criteria for measuring sustainability early on.⁷

The evaluation process is further strengthened by tying evaluation to the why and how of the program explanation. Using the cause-effect steps outlined by the explanation of what should happen in a market (e.g., new private market entrants, changes in market structure, valuing of non-energy benefits) offers a better basis for judging whether or not the program is responsible for any of these observed changes. This also shifts the indicators away from enumerating program activities toward documenting market responses to the activities.

In the proposed approach, program and portfolio improvement is separated from performance evaluation of administrators. Evaluation at the program and portfolio level uses real-time non-adversarial techniques to make programs more effective. Independent collaborative evaluation of this type gives market sector administrators the information to make on-going corrections in both programs and portfolios. This could include scaling some programs up, modifying others, adding a new one, or ending some early. It also recognizes the importance of a market focus for evaluations. In current CBEE practice, programs can be evaluated in isolation from other activities in the same market. For example, in the Large Commercial Retrofit market segment, the evaluation efforts focused on the Standard Performance Contracting Program without considering the training and rebate program elements in the same market.

Pilot Initiatives as a Risk-Reducing Mechanism

As a further safeguard against the risks of both ineffective programs and excessive costs, the fourth enhancement in the recommended framework encourages the use of pilot initiatives for the most promising new ideas. This is a comparatively low-cost way to keep multiple options open, build market understanding and further refine new ideas before committing funds to costly statewide programs. Pilot initiatives also offer possibilities for comparing program ideas across geographic regions, political jurisdictions or using different delivery methods.

Conclusions

These four enhancements continuously build new knowledge about market structure and behavior. Long term change or market transformation is fueled by continuous market innovation. A market's method of innovating is a product of the existing structure of rules,

⁷ Op cit., v1, p. 58.

information, and incentives within which businesses develop their R&D and marketing strategies and in which customers exercise their choices. Past efficiency programs based on limited understanding of human behavior, technology applications, and markets have rarely had lasting market effects once programs have ended. Successful, sustainable initiatives will use knowledge about dynamic market systems to direct information where it wasn't going before in forms that are more usable. Programs cannot simply provide more information, but must creatively and consciously change information acquisition habits. This could include making information more conspicuous, easier to interpret or by adding new trustworthy information intermediaries.

6. Application of Market Transformation Principles in the Administrative Structure

In order for these four principles to become more than just words on paper they have to be reinforced in the administrative structure of the PGC Program. The market transformation principles and the administrative structure need to reinforce one another in six key ways:

1. Create market-focused administrators: Administrators of market sectors will need sufficient responsibility and latitude to be able to design a portfolio of programs collectively focused on specific market objectives. These programs will be more effective because they will be based on explicit causal explanations as well as continuing market focused learning and evaluation.
2. Integrate collaborative non-adversarial feedback into programs: This is a powerful means of continuously adjusting portfolios and improving program design and delivery to avoid wasting funds on ineffective programs. It encourages evaluators to communicate effectively and share responsibility for the use of their findings.
3. Provide for new operational guidelines by which to measure success: A new set of operational guidelines is now needed for the design and evaluation of market transformation programs, including how the success of those programs should be measured. By building this into the transition period, the guidelines would be ready for use in soliciting and contracting with post-transition administrators.
4. Reward structure does not penalize administrators and program implementers for risk-taking and innovation: Administrators need to be evaluated on the overall management of their portfolios, not the success of individual programs. Willingness to innovate will be one of the evaluation factors.
5. Provide a strong system of corrective feedback for the administrative structure.
The proposed structure needs to avoid locking in one particular organizational structure by setting up two independent evaluation and review functions, one for administrators and programs and another for overall PGC performance.
6. Assure incubation and piloting of new ideas: The administrative structure needs to allocate funds for local governments, nonprofits and other non-utility entities to propose program ideas for needs not currently being met.

B. Program Funding Issues

Sec. 44(b)(5) requests the Energy Commission to consider [w]hether eligibility for program funds should be expanded to support the ability of electricity consumers to shift electricity usage in response to pricing differences. In addition, Sec. 44(b)(6) asks the Energy Commission to consider [t]he appropriate funding levels for energy efficiency and conservation in the post-2001 period and appropriate program oversight in the post-2001 period.

This section considers both these issues along with providing a more detailed discussion of the need for the PGC Program.

1. Need for Continued Public Goods Energy Efficiency Beyond 2001

When signing Assembly Bill 1105 into law, Governor Davis included language requiring the California Energy Commission to consider whether there is a need for the [public goods charge energy efficiency] programs.

The Energy Commission has contracted for an independent study by RAND Corporation to evaluate the benefits of maintaining or improving energy productivity in California's economy. These results will address the question of whether energy efficiency programs are needed in the future. A draft of this report will be available by mid-January 2000 for the Governor, Legislature and the Energy Commission.

In the absence of results from RAND's study, the staff has considered several factors to provide an interim assessment of the need for publicly funded energy efficiency programs:

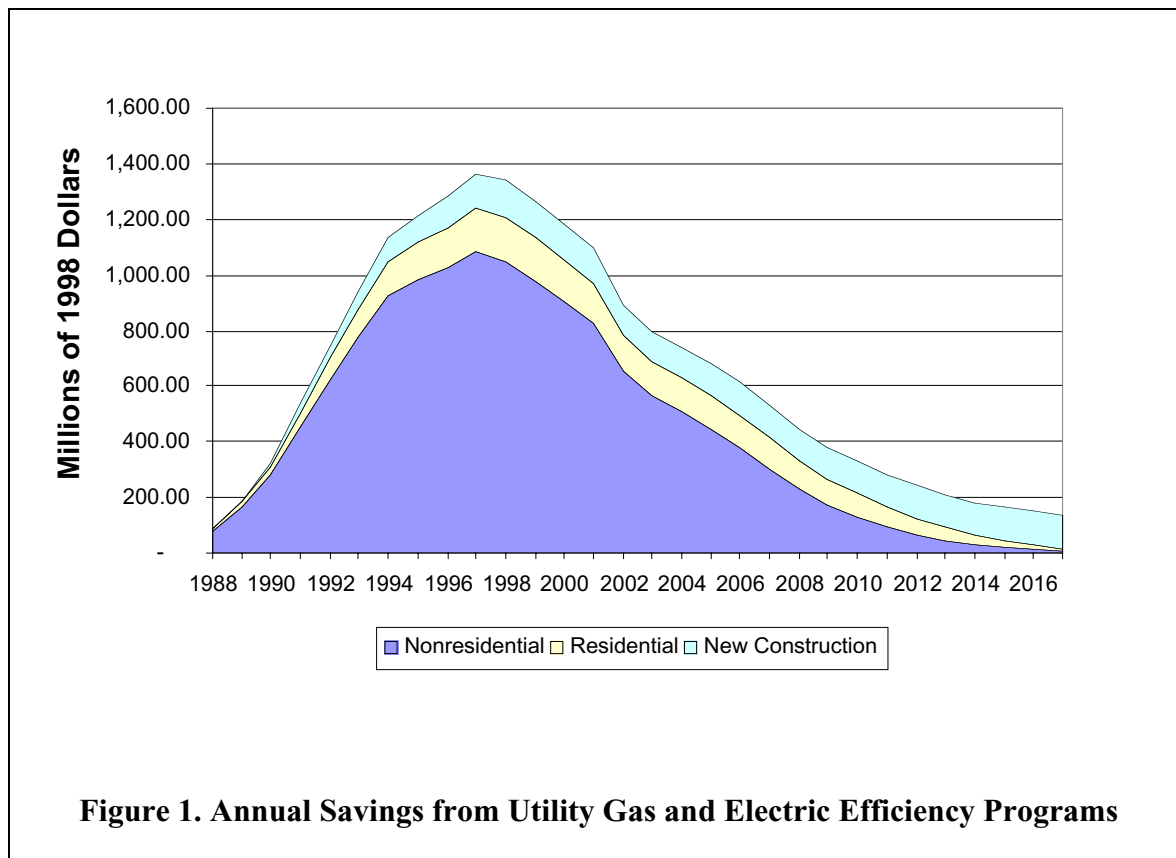
1. Evaluation of the effectiveness of current programs
2. Assessment of remaining opportunities for cost effective energy efficiency
3. Recent changes in market conditions

Factor 1: Evaluation of the Effectiveness of Current Programs

Current public goods charge energy efficiency programs will yield both short-term measurable energy savings and long-term sustainable changes in the market. Based on energy savings alone, conservative estimates of benefit/cost ratios for individual programs for 1995-1998 indicate that the vast majority of current and recent programs are cost effective in the short term.⁸ Furthermore, the programs are yielding significant energy and dollar savings for California's electricity consumers.

Figure 1 shows the estimated annual savings accumulated over the life of energy efficiency measures resulting from utility programs conducted between 1989 and 1998. The figure shows

⁸ Based on reported Total Resource Cost and Utility Cost test results reported by the utilities. Please see Appendix A for details.



annual benefits peaking at \$1.3 billion per year, with savings continuing to accrue after the program measures were installed.

At this stage, it is too early to assess the success of new programs begun in 1998 in achieving long-term market effects, which would not begin to become evident until at least late 2000. However, the results of several recent market assessment and evaluation studies indicate abundant opportunities remain for addressing barriers to the adoption of cost-effective energy efficiency by the market, particularly in the new construction, existing residential and small commercial markets.⁹ Regarding the small non-residential market, a recent study just out concluded that these customers have been under-served by previous utility programs, and most have not implemented even the most common efficiency upgrades.¹⁰

⁹ Jane Peters, Bruce Mast and Patrice Ignelzi and Lori Megdahl, *Market Effects Summary Study, Final Report, Volume I*. Published by Research into Action, December 15, 1998. Available at www.cadmac.org.

See also: *Draft Non-Residential New Construction Baseline Study*, RLW Analytics, Inc., September, 1999, and *Emerging Energy Saving Technologies and Practices for the Building Sector* by Steven Nadel, Leo Rainer, Michael Shephard, Margaret Suozzo and Jennifer Thorne, American Council for an Energy Efficient Economy, December 1998.

¹⁰ *1999 State Level Small/Medium Nonresidential Market Assessment and Evaluation Study*, Michael Rufo and Allen Lee, Xenergy, October 1999.

Factor 2: Assessment of Remaining Opportunities for Cost-effective Energy Efficiency

It is not possible to complete in time for the Transition Report a thorough assessment of the remaining potential for programs to produce cost-beneficial market changes that increase energy efficiency investment in different market sectors. However, staff used existing data and methods to develop a preliminary estimate of the remaining potential in the commercial and residential sectors, and to estimate the energy savings that would be achieved or foregone under different levels of PGC energy efficiency funding.¹¹ The key shortcomings of these methods are that they do not include energy savings potential from market transformation programs, and the measure cost and efficiency data used to complete this analysis were collected in 1996 and need to be updated.¹² Each of these factors is likely to result in an understatement of the remaining cost-effective energy efficiency potential.

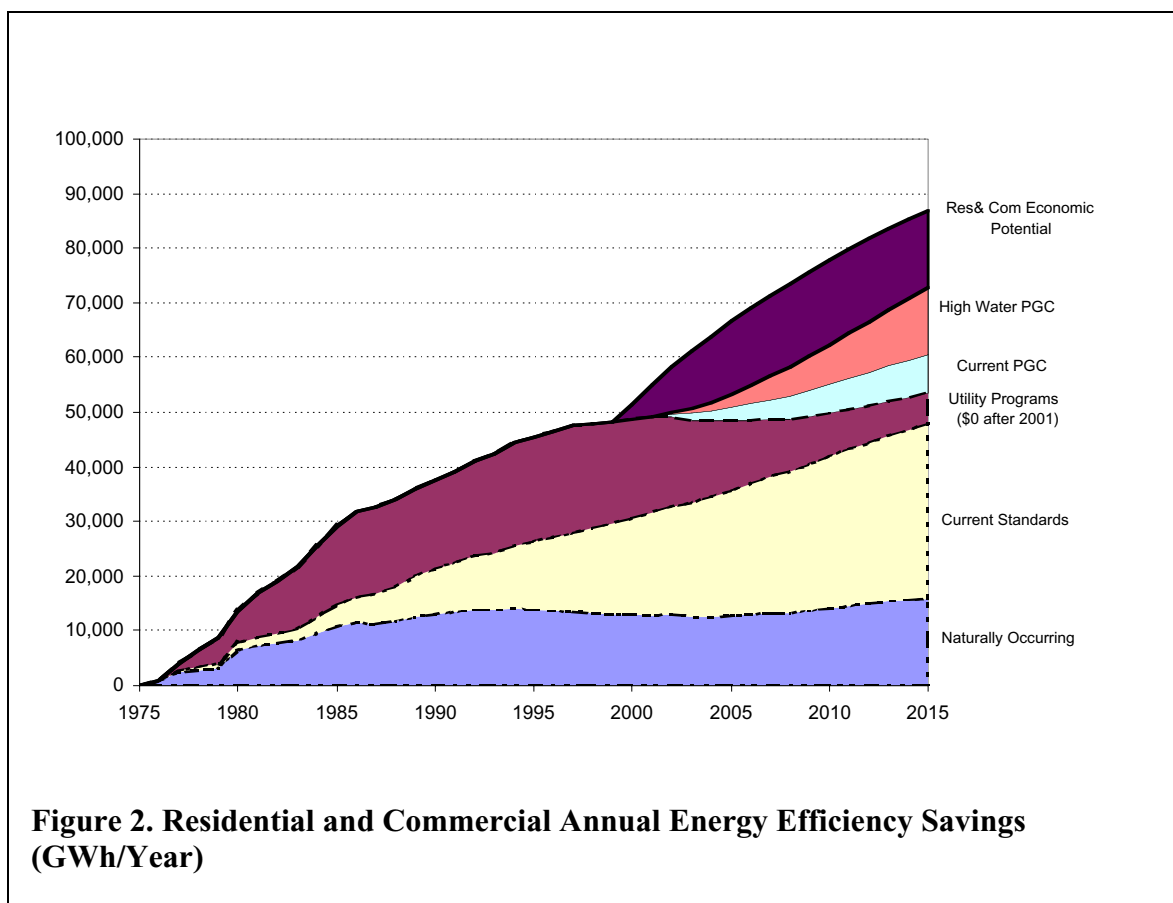
Despite these limitations, the analyses indicate that significant cost-effective potential remains for cost-effective energy efficiency above and beyond that which would occur due to market forces and the building and appliance standards alone.

Figure 2 shows the annual historical and projected future cost-effective electricity savings from various energy efficiency sources, accumulated vertically. The bottom wedge shows the energy savings produced by energy efficiency investments driven only by the market price of electricity, unaided by special programs or government intervention.¹³ As would be expected, beginning in the mid-to-late 1990s, the market price effect wedge shows that spending on energy efficiency will decline as the customer transition charges are removed from customer bills. The second wedge from the bottom indicates that electricity savings from the maintenance of current building and appliance standards are expected to continue to grow over time, along with the number of buildings built and appliances purchased.

¹¹ The California DSM Resource Assessment Model (CALRAM) uses levelized measure and marginal costs, effects of DSM measure life, penetration rates, measure and technology data from the Energy Commission's Database for Energy Efficient Resources (DEER) to evaluate which measures will provide cost-effective energy savings under various scenarios. Measure cost-effectiveness is evaluated using the Energy Commission electricity price forecast and a value of reductions in emissions. Staff also used DENRAM (DSM ENergy Resource Assessment Methodology), a program-based method that considers program funding levels, energy savings per dollar spent (program effectiveness), program savings decay over time, and program lifetimes to derive annual or first-year program savings which are then decayed over time to yield cumulative impacts. The method is consistent with utility and Energy Commission program level estimates of energy efficiency impacts in the past.

¹² Energy Commission will be issuing a contract to update measure cost data in early 2000.

¹³ The estimates of market (price) effects comes from the Energy Commission's demand forecasting models, which account for energy consumption using engineering and econometric methods. The most recent publication describing the models and their forecasts, Baseline Energy Demand Outlook, is available on the Commission's web site.



The third, fourth, and fifth wedges from the bottom show forecasted cost-effective electricity savings under three funding scenarios beginning in 2002: 1) if PGC program funding were to be terminated after 2001; 2) if PGC funding were maintained at current levels and 3) if PGC funding were restored to the high water mark of over \$388 million¹⁴ per year set by electric and natural gas utility spending in 1993. The upper bound of the chart, Residential and Commercial Economic Potential, forecasts the total electricity savings in the residential and commercial sectors that could be achieved if all remaining cost-effective investments were made. Over the past ten years, the cost of obtaining efficiency in terms of program dollars spent per kilowatt-hour saved has been increasing slightly, and these estimates assume that this trend will continue into the indefinite future.¹⁵ If funding were continued at the 1998 level, the energy savings would increase to about 51,000 gigawatt-hours per year by 2005, compared to a decline to 48,400 under the funding termination scenario. If funding were stepped up to the high water level of 1993,

¹⁴ Adjusted for inflation to 1998 dollars.

¹⁵ The decline in electricity savings per dollar invested in energy efficiency programs has not been the same for all programs in all sectors in all utilities. Some sector programs have even seen *increases* in energy savings per dollar. It is possible that some of the declines in efficiency gains resulted from program design problems, within-utility funding reallocations, or any number of reasons not yet identified. The declines certainly do not reflect market transformation principles, the introduction of which will almost certainly significantly effect improvements in efficiency per program dollar spent. This preliminary analysis, without having the benefit of quantitative analysis of these different impacts, or accounting for differences that might occur if utilities were not the principal providers of efficiency programs, assumes that the declining trend to lower savings per dollar, in the aggregate, will continue.

savings would increase to over 53,000 gigawatt-hours per year by 2005. Though these savings are significant, 13,000 gWh per year by 2005 would remain untapped even with funding at its historical high, more than enough to offset forecast growth in commercial electricity demand between now and 2005. It should be noted that, due to program costs and diminishing returns, the upper bound is not achievable in practice and is only indicative that opportunities for cost-effective savings remain. However, more effective portfolio management and greater reliance on market transformation could offset the historic decline in program effectiveness.

Factor 3: Changes in Market Conditions

There are three significant market changes that are expected as a result of restructuring:

1. Electric prices are expected to decrease for some customer segments, although this is not assured.
2. Electric prices in the Power Exchange market will remain complex and volatile. It is not clear at this time to what extent these price signals will reach different customer classes.
3. New power plants are now funded at investor risk rather than customer risk.
4. Reliability problems and potential brownouts are forecasted by the Energy Commission and North American Reliability Council, in part due to the uncertainties created by restructuring over who is responsible for reliability and additional uncertainties about who will build the power plants or transmission lines to meet expected demand.

Staff believes that while the first factor might reduce the financial incentive to pursue energy efficiency for some customers, the second and third factors support the continued promotion of energy efficiency investments and sustainable changes in markets through energy efficiency programs for the following reasons:

1. Price reductions will be spread disproportionately to large customers and may not occur for residential customers.
2. A consumer's best hedge against high peak prices is to invest in energy efficiency equipment and controls that give customers the capability to control and reduce electric usage. In addition, investments in energy efficiency are increasingly valued for consumer benefits beyond cost reduction such as increased personal comfort, reduced maintenance costs and increased property value.
3. The private energy efficiency market to serve smaller customers is not to the point where it is well-functioning and includes barriers to investment that are not likely to be reduced.
4. Changes in the rate structure due to restructuring may make energy efficiency investments that reduce peak load even more attractive to customers.
5. If the reliability problems forecast by industry actually come to fruition over the next two years, there may be an important role for targeted energy efficiency programs to reduce peak load in key congested areas. The extent of this problem, and the potential role of publicly funded energy efficiency programs in addressing this problem are being examined in another proceeding to be concluded in May 2000.

Conclusions Regarding Program Need

The above factors provide a preliminary indication that significant net public benefit could continue to be realized by continuing publicly funded energy efficiency programs. Numerous market barriers continue to persist, and state policy makers and program administrators are at the beginning of the market transformation learning curve. Much is being learned in these early generations of market transformation programs that may significantly improve the state-of-the-art of program design, encouragement of innovative approaches, and improvements in evaluation techniques to provide early feedback on program success.

2. What is the Recommended Funding Level for Energy Efficiency Programs Beginning in 2002?

The staff recommend a total funding level of \$294 million per year beginning in 2002 subject to review and modification every four years. The first formal review of funding level would occur in 2004 in order to effect legislation to modify funding for 2006. A review is recommended in 2000-2001 as part of the transition strategic plan to provide a more thorough assessment of the funding requirements of programs than was possible for this report and a better assessment of the actual resource requirements of the new administrative structure.

In developing this funding recommendation, the staff considered a variety of stakeholder input, then applied a balance of the following principles:

1. Adequately address the current magnitude of remaining economic energy efficiency potential to avoid lost opportunities ;
2. Include sufficient resources to address the potential need to contribute to improved electricity system reliability;
3. Consider the estimated resource requirement of the adopted administrative structure;
4. Do not create an undue cost burden on ratepayers;
5. Avoid shocks to energy efficiency markets that might result from large swings in funding level;

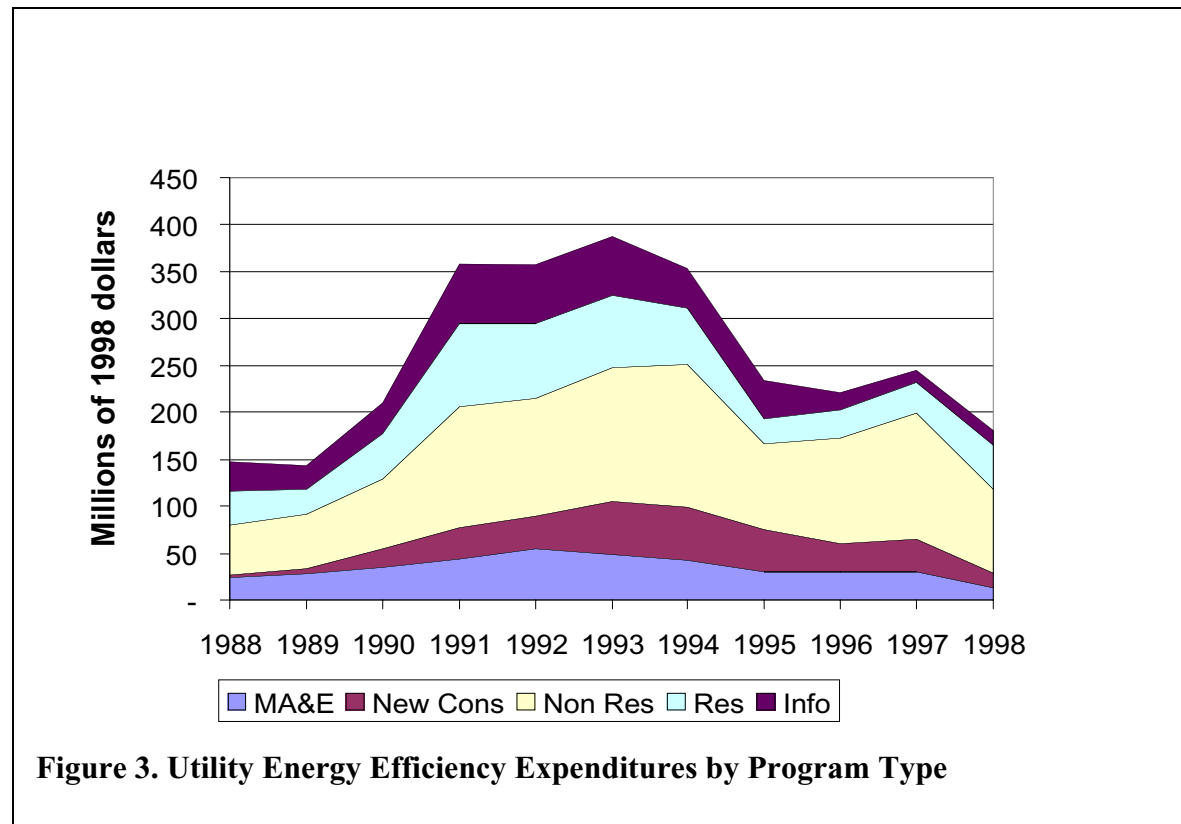
Background data for the first principal was discussed in the context of the continuing need for the program. The policy goals proposed in the Introduction address the second principle, and suggest that funds will be needed for three types of programs:

1. Programs focused on achieving sustainable changes.
2. Reliability-focused programs.

Resource requirements for these three program types are discussed below in the context of three major markets: residential, nonresidential and new construction. Pending a determination of the role of PGC efficiency programs in solving reliability problems and the optimal balance of market transformation and resource acquisition programs, these two categories are discussed together.

3. Funding Requirements for Market Transformation and Resource Acquisition Programs

As background for discussions about the funding requirements in each major market sector and for applying principle 5, it is helpful to understand the historical costs and benefits of utility energy efficiency programs. Figure 3 shows the range and distribution of funding for these programs over the past 10 years. Figure 1 shows the expected savings from these programs that is expected to have been achieved and will continue to accumulate over the life span of individual efficiency measures.



Residential Market

Expenditures on residential programs were \$54 million in 1998. Funding levels for both gas and electric programs averaged \$61.5 million per year between 1988 and 1998 in this sector, although funding has ranged from \$25 million to \$90 million, as shown in Figure 3. Current residential programs focus on the promotion of more efficient heating and cooling systems, lighting systems and household appliances using a variety of program strategies. Strategies include the use of Energy Star branding and rebates to promote more efficient appliances, customer vouchers to help finance discretionary retrofits or system upgrades from qualified contractors, specialized efficiency training to HVAC contractors, and financial incentives for stocking high efficiency products for distributors. Since these are largely new efforts, the market penetration of these strategies in the HVAC and appliance field is still low and program

managers report no signs of saturation or complete market transformation in any of the four major program areas. Overall contractor participation in the training program is estimated at less than 5 percent of all contractors and the purchase of efficient compact fluorescent lamps have only been installed in less than 10 percent of the applicable fixtures.

The direct value of the energy savings produced by the last two years of these programs is estimated at \$150 million dollars, roughly 25 percent in excess of the \$120 million of investment stimulated by the program.

Results from the residential baseline survey of residential customers suggest that awareness of the concept of energy efficiency options to save energy is high among most Californians but that only 20 percent of residential respondents report having accurate information on where to purchase more efficient appliances or contractor services. Future program efforts are expected to focus on increasing the ease of access to more efficient lighting and appliance products and building the reputation and credibility of general and HVAC contractors who specialize in providing energy efficiency services.

Based on the continued opportunities to save energy in this sector and the positive benefit cost ratios of the last two years for these programs, staff recommends the current (1999) authorized funding level of \$90 million per year statewide is appropriate to continue into 2002. At that time staff should review the status of the target markets discussed above and the related cost effectiveness results and recommend a revised funding level.

Nonresidential Market

Program spending for nonresidential market programs was \$98 million in 1998 and was authorized at \$128 million for 1999. Major program elements included:

- Non residential SPC program
- Express Efficiency Rebates
- Audits to small and medium commercial and industrial customers.

Cost effectiveness ratios for these programs are high. However there is evidence that the market share of energy efficient measures in some key market segments are nearing saturation. Surveys show that over 85 percent of large commercial and industrial customers have retrofitted their building lighting systems with T-8 s and electronic ballasts over the last decade. Most large industrial and commercial customers can afford to hire energy managers. Recent analysis of rebate programs showed that up to 50 percent of customers might have invested in energy efficiency upgrades without any support from PGC funds. In addition program managers of the large non-residential SPC program have had difficulties in spending their full program budget in the last year.¹⁶

On the other hand, evidence gathered in small to medium commercial and industrial markets suggests that has been relatively little penetration of energy efficient technologies and practices

¹⁶ *Evaluation of the 1998 Nonresidential Standard Performance Contract Program*, Xenergy, June 1999.

in these sectors.¹⁷ Market focus groups suggest a significant potential opportunity to both save money and stimulate transformation in this market exist. Based on the results of several recent market studies, programs designed to increase customer awareness, ease of access to contractors and reputation of local contractors are likely to yield significant benefits. The utilities are considering spending up to \$10 million on new program designs and third party initiatives in pursuit of this opportunity.

Staff recommends continuing the current nonresidential funding level of roughly \$120 million per year until more evidence can be developed on the relative success of new pilot programs in the small commercial sector and the final evaluation for the non-residential SPC program is available in the spring of 2000.

New Construction Market

Program spending in the new construction market was \$16 million in 1998, \$13 million from electric programs and \$3 million for natural gas programs. The 1999 authorized budget was \$42 million. Principal program elements include:

- Targeted consumer promotion and information
- Incentives to builder sales forces
- Increasing awareness of energy star brand through advertising and demonstrations
- Training for builders and their subs on the whole systems approach
- Local government initiatives
- Cash incentives to market leaders who exceed Title 24
- Savings by Design program which provide technical assistance and cash to design teams in the commercial sector
- Energy Design resources which provides an integrated package of design and performance tools available to professionals at low costs.

Over the past decade, new construction programs have been among the most cost effective. Data on the effectiveness of the 1998 programs new construction programs produced \$2 of benefits for every program dollar spent. Twelve percent of total program energy savings from all programs came from this sector in 1998 but this fraction is projected to increase to 15 percent in 2000. The most cost effective new program elements were found in the commercial new construction program.

From a customer standpoint, energy efficiency opportunities in new construction are less costly to come by than changing out equipment in existing buildings. Although enormous energy savings have been attributed to the building standards, they still leave significant cost-effective potential due to the fact that they must be designed for the lowest common denominator. In particular, most of the additional gains can be obtained by focussing on new ways to design and construct buildings using a whole-system approach and building commissioning.

¹⁷ 1999 State Level Small/Medium Nonresidential Market Assessment and Evaluation Study, Michael Rufo and Allen Lee, Xenergy, October 1999.

Funding has ranged from \$2 million to \$57 million per year for new construction programs over the last decade. Given that recent programs are producing relatively high levels of net benefits and that technical analysis shows there is a remaining potential to save energy in this sector, staff recommends the Energy Commission set the funding level at the upper end of the recent funding patterns. We recommend a funding level of \$40 million per year for natural gas and electricity new construction programs, roughly equivalent to the proposed level of 42 million in 1999 and slightly lower than the \$44 million proposed for programs in the year 2000.

Summary Rationale for Market Transformation and Resource Acquisition Program Funding Levels

Staff's examination of the remaining potential for energy savings in each sector and the fact that the programs produced more net benefits to the public than costs over the last three years support the case for increasing funding levels above the current minimum level of \$228 million for electricity programs set by the Legislature. The declining trend in reported program cost effectiveness, expected decline in energy prices and the inability of the current administrators to spend all of the authorized program amounts in 1998 and 1999 support a reduction in funding. Staff has weighed these and other factors and concluded that use of the currently authorized funding level of \$275 million (funds for programs, MA&E and governance function) in 1999 should be recommended to the Legislature for energy efficiency programs. Staff's recommended funding level for each area and how it compares to both historical averages and the 1999 authorized levels is shown in Table 2.

Table 2
Recommended Program Funding Levels¹⁸ by Market Sector

Market Sector	Funding Average Last Decade¹⁹	1999 Authorized Level	Staff Recommendation
Residential	50	90	90
Non Residential	106	128	120
New Construction	30	42	40
Information²⁰	37	N/A	N/A
Total	223	260	250

Below we address the topic of whether additional funds may be necessary to help mitigate expected reliability problems in the electricity sector by reducing peak demand over the next three years.

4. Funding Requirements for Reliability-focused Programs

In the past utilities have used load management programs that enable utility control of electric load using remote controlled equipment cycling or interruptible tariffs, and increase the number of options customers have to adjust their electricity demand downward in response to higher costs of producing electricity during peak periods. In the restructured markets it makes more sense to focus on the demand responsiveness portion of previous load management programs because utilities are no longer responsible for managing loads to match supplies.

Previous load management programs targeted large nonresidential facilities because these customers are most likely to be sensitive to variations in price at peak and most capable of using controls to reduce this load if it makes sense given their production schedules. These facilities have the highest technical potential to shed load due to the nature of the load, the high fraction of these buildings which use energy management systems and the fact that most large customers are already required to use time-of-use meters and rate structures. If more effective price signals such as real-time pricing are more widely utilized, the market may drive the desired increases in demand responsiveness for large customers. Therefore, in the future there may be a greater need for public programs to focus on demand responsiveness strategies for residential and small nonresidential customers.

There has been much less load management program experience in the residential sector. There are a variety of strategies that could be used to increase the demand responsiveness of residential customers to increases in energy prices during times of peak demand. These strategies include: promotion of time of use meters, incentives to reduce the cost of home energy management systems capable of shifting load, and introduction of new customer bills that convey more useful information about the costs of using electricity during peak periods. However the cost-

¹⁸ Program funding data excludes Load management, M&E and low income program expenditure levels.

¹⁹ In 1998 dollars

²⁰ Pre-1998 program expenses

effectiveness of these strategies have not been evaluated for some time and may require an extensive assessment.

New construction offers a unique opportunity to build or design in infrastructure improvements to increase a building's responsiveness to time of use prices that might not be cost-effective in a retrofit situation. These may include smart meters, control systems, and building standards to require minimum demand shifting capabilities in homes and businesses. Further study of the potential in this area is necessary.

The scale of the electric system reliability problem and the extent to which demand side strategies can contribute to solutions has not yet been fully analyzed. It may be appropriate for region-specific transmission owners or the ISO to fund some of these strategies. It may also be appropriate to use PGC funds to influence customer investments in energy efficiency investments to reduced peak demand in local areas where reliability is a problem.

Given the unknown magnitude of the potential reliability problem, staff still believes it is appropriate to recommend at least a small amount of funding now from the PGC fund to support reliability. This level would be subject to future modification as the anticipated legislation is finalized. Staff believes that failure to recommend a minimum funding level now to cover the possibility that this funding level may be needed after these studies are complete may result in a lost opportunity and no funding available for programs that are in the public interest. For this reason staff recommends initially allocating up to \$5 million per year for residential, \$15 million for nonresidential and \$1 million for new construction for a total of \$21 million for programs designed to increase demand responsiveness. This amount could be revised in 2000 depending on the outcomes of the CPUC rate-making process and the results of the ongoing reliability study. For reference total spending by utilities on load management programs ranged from \$15 to \$34 million annually over the last decade.

5. Non-Program Expenses

Market Assessment and Evaluation

Expenditures on evaluation have ranged between \$13 and \$54 million between 1988 and 1998, which represents between seven to 20 percent of program costs. Most recently, the CPUC authorized \$12.1 million for all M A&E activity in 1999. Staff believes that expenditures for evaluation should not be exceed 10 percent of the total program dollars. The success of market transformation programs relies heavily on thorough market assessments and quality feedback from evaluators. Indeed, inadequate market assessment and evaluation budgets in 1998 and 1999 led to severe problems in the 2000-2001 program planning process due to insufficient data on energy savings and the ability of programs to achieve market objectives. Given our proposed division of evaluation responsibilities to allow administrators to help fund market characterization studies currently funded by the evaluation groups, we propose budgeting 8 percent of the total program funds or roughly \$20 million for market assessment and evaluation.

Administrative Support for Governance Structure

The staff suggests as a general principle that governance funds for policy oversight, contract management and technical consultants should not exceed two percent of the program total or \$5.4 million dollars. Initial estimates of administrative requirements are for \$3 million for 30 positions at the Energy Commission.

Independent Review Panel

Based on experience with the PIER independent panel and assuming four meetings per year will be required, we project expenses for supporting the panel to run approximately \$300,000 per year.

Recommended Funding Level for 2002-2005

Adding these governance and evaluation budget amounts to the programmatic total yields a budget level of \$294 million per year or roughly 1.4 percent of total revenues from electric and natural gas utilities owned by private investors and within the jurisdiction of the CPUC.

Table 1. Recommended program Funding Levels

Expense Category	Suggested Annual Funding Level (millions)
Programs focused on sustainable benefits	\$271
Reliability-focused programs	\$21
Market Assessment and Evaluation	\$20
Administrative support for governance and contract management functions	\$3
Independent panel	\$0.3
Total	\$294

Parties have argued that large swings in funding level tend to create confusion and disruptions in the market. Looking at recent funding levels with this in mind, the proposed funding level is approximately equal to the \$282 million budget proposed for calendar year 2000 after adjusting for inflation. For historical comparison, the funding for gas and electric energy efficiency programs (excluding load management programs) between 1988 and 1998 averaged \$233 million per year and ranged from \$142 million to \$388 million per year in 1998 dollars, as shown in Figure 3.

6. How Should Funding Levels Be Modified Over Time?

The staff is considering three process options for modifying funding levels over time:

1. Authorize continuous appropriation of the energy efficiency funds subject to review every four years by an independent panel, which would reassess the continuing need for the programs and the appropriate funding level and make recommendations to the Legislature;
2. Adopt a sunset provision for the current program in year 2006 and require legislative re-authorization of both the program's goals and funding levels post 2006.
3. Seek continuous appropriations for the funding level that would be modified every two years by the legislature based on annual reports from the Energy Commission or biennial reports from the independent review panel.

Staff supports Option 1 for funding level review every four years. This is because experience suggests it may take three to four years to accurately evaluate the effects of market transformation programs. The independent panel will have an opportunity to complete two biannual reports on the effectiveness of the administrative structure in accomplishing the legislature's goals, which will provide important information for the review of funding levels.

7. Who Should Contribute to Funding the Programs?

Currently funds to support energy efficiency programs are collected from electric and natural gas investor-owned utilities based on pre-specified funding levels in Assembly Bill 1890 and annual funding authorizations in Public Utilities Commission proceedings. Publicly-owned utilities currently collect funds to support their own public goods programs at a rate of 1.7 percent of their overall revenues but retain independent authority to spend and manage the funds at the local level. On average, 41 percent of these funds are going to energy efficiency programs and the balance to low income, renewable energy and research and development public purpose programs.

The staff does not recommend that publicly-owned utilities be required to transfer their public goods charge collections to the statewide program administrator, as has been discussed in previous proceedings. However, the publicly-owned utilities should voluntarily report the annual spending and expected benefits of all public goods programs to the Energy Commission to ensure opportunities for coordination are maximized and to ensure the Legislature that these funds are being well spent.

Currently, all customer classes contribute to public goods programs regardless of the degree to which they participate in the programs. The Public Utilities Commission has stated its intention that all customer classes should share in the benefits from these programs. The benefits created by the current program budgets for residential and nonresidential markets are approximately proportionate to the public goods charge contributions from these groups.

The staff proposes to continue to collect public goods charge funds from all customers subject to Public Utilities Commission jurisdiction and have these funds transferred on a periodic basis to the program governance and management functions.

8. How Should Funds Be Collected

The staff believes that there are two main fund collection mechanisms that should be considered:

1. Specify predetermined dollar amounts for each electric or natural gas utility programs and ask the CPUC to develop a rate collection method to raise the required funds and transfer them periodically to the administrative structure;
2. Specify a uniform public goods charge in mills/kWh for all investor-owned utilities or for all utilities in the State of California, and a uniform natural gas surcharge in mills/therm for end use customers of all natural gas distribution companies regulated by the Public Utilities Commission.

The staff notes that the policy issues surrounding different forms of collection mechanisms are complex but were summarized in the 1996 Energy Efficiency Working Group Report²¹. Some key issues include: the need for exemptions from fund collection for non-core gas customers, the potential need for exemptions from public goods charge collection for wholesale users of gas to self generate electricity, and the potential fuel switching impacts of imposing a public goods charge on natural gas customers who have the ability to easily switch to propane use.

Staff supports method number 2, a uniform charge(mills/kWh/mills/therm) for the following reasons:

- Setting a uniform charge collects the same proportionate contribution from each energy distribution company and revenues collected will rise and fall based on revenues collected from those companies, automatically adjusting for inflation in the price of delivered energy. Since available funding for energy efficiency would increase as electricity prices increase, this serves to provide additional resources for mitigating higher energy and other societal costs associated with more energy generation and transmission.
- Specifying a fixed dollar amount for each UDC using option 2 creates issues of fairness between different utilities and a need to negotiate each amount with each UDC.
- Specifying a dollar amount also engenders annual conflicts about the appropriate rate making process at the CPUC as different rate classes seek to minimize their proportion of the total energy efficiency bill using arcane arguments about the relative cost of serving customers in each class. In addition setting a dollar level makes it necessary to adjust the levels annually or biennially to keep track of inflation. Tying funding to mills/kWh greatly simplifies the process for the California Public Utilities Commission.

The staff believes the Energy Commission and the Public Utilities Commission should use the current arrangements for transferring funds from the utilities to state accounts for the PIER and Renewable programs as a model for a new agreement for the new energy efficiency structure.

²¹ Funding and Administering Public Interest Energy Efficiency Programs, Chapter 3, California Energy Commission publication number #300-96-004, August 1996.

Uniform Surcharges Needed

This section presents information on what level of charges would be needed to collect the recommended funding level of \$294 million from customers of the four major California investor-owned utilities. Two cases were examined:

Option 1: All funds are collected via a surcharge on electricity customers only

Option 2: All funds collected by a surcharge on gas and electric customers

Option 1:- An electric-only surcharge of 1.7 mills/kWh would raise \$294 million in funds, roughly 1.9 percent of \$15.5 billion in revenues collected by investor-owned electric utilities in 1998. However, staff does not favor this approach because it is not equitable because electric customers would subsidize heavy users of natural gas. Instead we recommend that separate PGC charges be applied to all electricity and natural gas customers.

Option 2: An electric public goods charge of 1.4 mills per kWh would raise \$237 million from electric customers. The remaining \$57 million for natural gas programs represents less than 1 percent of 1998 gas revenues for CPUC jurisdictional customers, and could be raised using a uniform charge of 4.6 mills per therm. These two charges would be sufficient to collect \$294 million in annual funding.

The impact of this level of charge on a typical residential bill is modest, the PGC charge would account for roughly 1.3 percent of the electricity bill and less than _ of one percent for the natural gas bill.

Table 2. Annual Cost of PGC Energy Efficiency Programs to the Typical Residential Consumer

	Electricity	Natural Gas
Annual energy use	7,000 kWh	600 therms
Annual PGC Cost	\$9.80	\$2.76
Typical total bill	\$700	\$400
PGC as % of bill	1.4%	0.66%

C. ADMINISTRATIVE STRUCTURE ISSUES AND RECOMMENDATIONS

Assembly Bill (AB) 1105 (1999 Stats., Chapter 67) directs the California Energy Commission (CEC) to conduct a public process to prepare (1) a *transition plan report* regarding the transfer of energy efficiency programs from the Public Utilities Commission to the State Energy Resource Conservation and Development Commission . . . and (2) an *operational plan report* that recommend(s) a post-transition administrative structure that is designed to achieve efficient and effective program administration. Section 44(b) of AB 1105 specifically requires the operational plan report to consider certain issues, including the following:

(4) . . . designating a public benefit, nonprofit corporation as the program administrator [and]

. . . .

(7) [m]inimizing the role of state agencies in providing administrative and implementation services.

In order to respond objectively to these directives, we must address three interrelated administrative structure topics, namely: (1) what primary **functions** must the post transition administrative structure be able to effectively carry out? (2) what key **evaluation principles** should we use when considering different administrative structure options? and (3) what are the major administrative structure **options** for performing the program functions and satisfying the evaluation principles to achieve efficient and effective program administration ?

1. Functions Which the Administrative Structure Must Carry Out

Any efficient and effective administrative structure for the PGC Efficiency Program must be capable of carrying out a variety of activities listed in five key **functional** areas of the program. These are (1) Governance and Oversight; (2) Program Administration; (3) Program/Project Delivery and Implementation; (4) Internal Evaluation; and (5) Independent Program Review.

We recognize that it may be difficult to draw bright lines between these functional categories, and that a single entity could perform activities within one or more of these areas. However, using the five functional categories ensures that all key PGC Efficiency Program activities which the administrative structure must perform are identified. In addition, these functional categories help to minimize semantic confusion that might otherwise occur as the discussion and debate about administrative structure options proceeds. Each functional category is defined and illustrated more fully in the material which follows.

(a) Program Governance and Oversight Functions

The following activities fit within this category: developing a strategic plan which clearly identifies policy-level goals and related guidance concerning program implementation; decision making regarding major funding allocations between key program areas; obtaining feedback and evaluation on program performance; determining future program directions and duration; and dispute resolution. Among the most important of these governance and oversight activities are the following:

(1) Broad Policy Setting, Budgeting and Oversight: Pursuant to Legislative authorization, the governing entity must establish broad policy goals for the PGC Efficiency Program, set broad budgets, and maintain a process for periodically reviewing actual progress toward meeting goals. Among other things, the governance function should include development of policy guidelines concerning program implementation and oversight.

(2) Selection and Oversight of Program Administrators: The governing entity must contract with key Program Administrators through appropriate selection processes, and then oversee the work of these program administrators to assure conformance with broad-based policy goals. (As explained below, these program administrators will be responsible for developing and managing an effective portfolio of programs.)

(b) Program Administration Functions

The program administrators will develop portfolios of well coordinated programs in their markets or program areas (referred to as residential, nonresidential, new construction, innovative, and reliability programs). They are responsible for establishing portfolio objectives. These objectives will be based on market needs and designed according to the principles outlined elsewhere in this report. They also will be accountable to the governance entity for the performance of their program portfolios and fulfillment of related objectives. They will also be responsible for hiring the managers for the individual programs in each portfolio and evaluating their performance.

A number of activities fit within this functional category, including the following:

(1) Assessing Markets: Each program administrator must identify opportunities to improve energy efficiency in the markets within its assigned program area. Where possible, program administrators must identify opportunities to make sustainable improvements in specific markets based on data collected on the structure of markets, trends in prices and market share, and data on customer behavior. While some market research is appropriately done by the program administrator, much energy market data supports public policy purposes beyond energy efficiency. The Energy Commission will continue to collect, analyze, and disseminate energy market data necessary to fulfill its responsibility for energy-industry monitoring and analysis, as well as to support energy efficiency program development.

(2) Targeting Market Areas: Each program administrator must select market areas for intervention, and develop appropriate portfolio objectives and portfolio programs to meet policy goals for those target markets.

(3) Designing Programs: Each program administrator must design appropriate intervention strategies and specific programs to (i) achieve portfolio objectives; (ii) solicit innovative ideas on program and market strategies from third parties; (iii) work with stakeholders to ensure high participation, ensure public comment is representative, and develop alliances and partnerships with private firms; and (iv) permit changes in portfolio or program design in response to policy changes from the oversight body, relevant feedback from stakeholders or market actors, and/or feedback from the program evaluation process. Program area managers should ensure that all

programs are designed and based on a plausible causal theory of how the program will create desired change in the market.

(4) *Developing and Managing Market-Focused Portfolios:* Each program administrator must develop market-focused portfolios of mutually reinforcing programs and pilot projects that are collectively aimed at specific market objectives. The management team must assemble these portfolios in a way that will minimize risk while maximizing realization of policy goals. The program administrator will be responsible for allocating budgets between the various programs and pilot projects within a portfolio, and will be accountable for the *overall* performance of the portfolio. However, the program administrator will not oversee the individual projects within the portfolio. See Item (c)(2), below.

(5) *Selecting Entities To Actually Implement The Program(s):* When program design efforts have been completed, each program administrator will contract with various entities to actually implement the programs in question.

(c) Program Implementation and Delivery Functions

(1) *Program Implementation:* A number of entities will be needed to implement the programs or pilot efforts developed by the program administrators. Among other things, these entities will deliver goods and services (through subcontractors when necessary), implement market tracking systems, participate in regional alliances and trade groups, and provide feedback recommendations to program designers and policymakers as projects proceed.

(2) *Individual Program Management:* Program implementers will be responsible for managing their individual programs or pilot projects to ensure delivery of the portfolio objectives and incentives specified by the program administrator. This individual program-level administrative function is distinct from the much broader program administrator function discussed in item (b)(4), above.

(d) Internal Evaluation Functions

(1) *Evaluate Individual Programs and Project Performance:* An entity or entities will need to conduct periodic real time evaluations of individual programs and pilot projects to determine their potential or actual contribution to the portfolio objectives and overall goals of the PGC Efficiency Program. Results will be provided to both the PGC Efficiency Program governing entity and to the program administrators for use in determining the need for changes in program policies, program budgeting, program design or program testing.

(2) *Evaluate Program Administration:* Evaluators will assess the overall performance of program administrators and their program portfolios, including their comprehensiveness, ability to manage risk, synergy of the portfolio programs, the degree of innovation presented in the portfolio, and the contribution of the whole portfolio to achieving policy goals. Results will be provided to the PGC Efficiency Program governing entity and the program administrators for use in determining the need for changes in program policies, program budgeting, program design or program testing.

(3) *Integrate Evaluation Findings With Other Functions:* Effective feedback loops must be established and maintained to ensure that the results of key evaluations are actually considered and incorporated into various decision functions, including selecting target markets, portfolio strategy and management, program design, program implementation, and solicitation of new ideas.

(e) Independent Program Review Functions

(1) *Evaluate Overall Program Policy and Administrative Structure:* An entity will need to periodically conduct an independent review of the entire PGC Efficiency Program from both a policy and an administrative effectiveness perspective. These reviews should be conducted biennially, providing objective feedback to the Legislature and others regarding the ongoing effectiveness of the overall program and suggesting ways for improving the administrative structure and functions.

(2) *Fiscal Auditing:* The PGC Efficiency Program entails a significant amount of funds, so a periodic independent audit regarding the fiscal integrity of the entire program will be needed. This may be an annual responsibility.

2. Principles Which Should Be Used to Evaluate Administrative Structure Options

Key **evaluation principles** need to be taken into account when determining the best option(s) for the post transition administrative structure. Based on input received from the public and others, below are those evaluation principles which should be taken into account prior to deciding upon the proper post-transition administrative structure for the PGC Efficiency Program. We recognize that some of these evaluation principles may be at odds with each other (e.g., maximizing public input and accountability while at the same time minimizing bureaucratic red tape), and policymakers will have to establish their relative priorities in such circumstances. Nevertheless, we must consider all of these principles to establish a sound administrative structure for the PGC Efficiency Program.

(a) Provide Smooth Program Continuity

It is important for the new administrative structure to do no harm, nor create any unintended hiatus with ongoing PGC Efficiency Program efforts. Therefore, the new administrative structure must be (i) legal; (ii) capable of adequate staffing; and (iii) capable of starting up operations quickly.

(b) Make Efficient Use Of Existing Resources

The new administrative structure should be designed to use resources efficiently. To do so, it should (i) avoid unnecessary complexity in the overall design of the administrative structure; (ii)

make use of existing abilities and expertise wherever possible²²; (iii) provide clear policy guidance from the beginning, while limiting micro management from the top-down; (iv) streamline contracting and other administrative procedures to eliminate unnecessary red tape; and (v) ensure that the total financial costs of administering the program (including overhead costs and unintended tax consequences) are minimized.

(c) Operate In A Fair and Effective Manner

The new administrative structure should be designed to ensure that the PGC Efficiency Program is operated in a fair and effective manner. Accordingly, the structure should be designed to (i) make funding awards based on merit, not politics or favoritism; (ii) avoid conflicts of interest; (iii) effectively use a portfolio of programs that can be flexibly modified when circumstances warrant; and (iv) provide internal checks and balances within the PGC Efficiency Program.²³

(d) Provide An Open and Accountable Process To The Public

The new administrative structure should be (i) transparent and understandable to the public; (ii) accessible and receptive to public input and concerns; and (iii) subject to periodic independent review to ensure objective evaluation and public accountability.

(e) Support A Flexible, Innovative And Coordinated Program Design Process

The administrative structure should allow the PGC Efficiency Program to operate in a flexible, innovative and coordinated manner, including (i) the ability to respond quickly to changing market conditions; (ii) the ability to tailor programs when needed (i.e. avoid a one size fits all approach); (iii) the ability to test innovative ideas with local governments and others; (iv) the ability to use evaluations to improve the program and facilitate market learning; and (v) the ability to interact effectively with other programs and all other stakeholders (e.g., the PIER Program, the Low Income PGC Efficiency Program, local governments, utilities, etc.) to maximize program synergies and minimize unnecessary duplication.

²² The structure must be capable of including a variety of different entities with existing expertise, including (a) public entities (e.g., state agencies, local governments, state-funded colleges and universities); (b) private entities, (e.g., for profit and non-profit corporations, small businesses, etc.); and (c) utility distribution companies.

²³ To achieve this outcome, certain functions *should not* be combined in the same organization. For example: (a) broad policy-setting should be separated from program administrator and program implementation; and (b) the independent review of overall policy and administrative structure should be separated from all other functions. Among other things, a well designed system of checks and balances must ensure that portfolio managers receive the information, incentives and authority they need to periodically adjust their market-focused portfolios, and to weed out poorly performing programs and pilot projects in a timely manner.

3. Administrative Structure Options for the PGC Efficiency Program

There are three distinct *types* of entities which could perform the various PGC Efficiency Program functions identified in Section II.C.1., above. Specifically, these are (1) *public entities* (e.g., new or existing state agencies, local governments, state-funded colleges and universities, etc.); (2) *private entities* (e.g., for profit and nonprofit corporations, small business, etc.); and (3) *regulated monopolies* (e.g., the utility distribution companies(UDCs)). After considering the various evaluation principles proposed above, it is clear that no single *type* of entity is appropriate for carrying out *all* five functional categories of this program.²⁴ Instead, the post transition administrative structure will require a *combination* of entity *types* to carry out the program functions in a manner most consistent with the evaluation principles discussed earlier. No one participating in the public process giving rise to this report has disagreed with this conclusion. Accordingly, below we present the main options which have been identified for each of the major functions listed earlier, and certain pros and cons for each of these options.

(a) Governance and Oversight Responsibilities

Because the governance and oversight function of the PGC Efficiency Program needs to be conducted in an open, fair and publicly accountable manner, activities falling within this functional area should be reserved exclusively to some type of *public entity*, and should not be performed either by a private entity (e.g. a for profit or nonprofit corporation) or by a regulated monopoly. A consensus appears to exist on this point, and no information has been presented to contradict this conclusion. Therefore, the main options which arise in this area of responsibility are to (i) assign the function to an *existing* public agency (such as the Energy Commission), or (ii) create a *new* public entity to carry out this function.

(1) The Energy Commission Option

If the PGC Efficiency Program governance function is to be reassigned from the CPUC to an *existing* public entity, the only existing agency being seriously considered for such a reassignment is the Energy Commission.

²⁴ Thus, for example, while private entities or regulated monopolies may possess certain important attributes that are essential for performing program administration or specific program implementation functions (e.g., extensive experience with program management and/or credibility with private markets), these same *type* of entities lack essential characteristics which are needed to perform the program governance and oversight functions (e.g., openness and accountability to the public). Conversely, a public entity (e.g., the Energy Commission) may be well suited to perform important program governance and oversight functions, but be poorly qualified to conduct actual program implementation and delivery functions.

Pros For This Option

- The Energy Commission is a public agency currently responsible for setting energy policy for California.
- The Energy Commission has extensive governance experience with various energy efficiency programs, and also has recent experience with the governance and oversight of two other public interest energy programs, namely the PIER Program and the Renewables Program created by AB 1890 and SB 90.
- As an existing agency, the Energy Commission would be able to perform the governance and oversight functions with minimal start up delays.

Cons For This Option

- The Energy Commission is not the only agency with governance responsibilities for energy-related policies in California, nor does the Energy Commission currently have any authority to regulate the UDCs, who are key participants in this program. There may be other entities which have an interest in participating in the governance of the PGC Efficiency Program.
- The Energy Commission's governance of other public interest programs has been criticized because of lengthy delays in some parts of the contracting process.
- The Energy Commission currently has many other responsibilities, and may not be able to give the PGC Efficiency Program the governance focus and resources which it requires and deserves.

(2) The Newly Created Energy Efficiency Authority Option

Pros For This Option

- Creating a new Energy Efficiency Authority could allow for broader representation in the governance function than is possible if the PGC Efficiency Program is assigned to the Energy Commission alone.
- Creating a new governance entity could allow the Legislature to address certain statutory requirements that currently apply to the Energy Commission.
- Creating a new Energy Efficiency Authority would give the new entity a single purpose focus which the Energy Commission does not have.

Cons For This Option

- Creating a new governance entity may be controversial, and will certainly result in start up delays.

- A new governance entity may not be able to avoid certain legal limitations faced by the Energy Commission (e.g. Constitutionally-derived civil service requirements), and may be less effective in dealing with such limitations than is an existing, experienced agency.
- Creating a single purpose governance agency may deprive that new entity of the breadth of focus which the Energy Commission has, and could make coordination with other public interest energy programs (e.g. PIER) more problematic.

(b) Administrative and Management Responsibilities

There are three possible options for the type of entity which could perform the activities listed in the program administrator category, namely: (i) assign these responsibilities exclusively to either a *state agency* or to the *regulated utilities*; (ii) assign these responsibilities exclusively to a *nonprofit corporation*; or (iii) assign these responsibilities to a *combination* of the key entity types that are qualified to perform them (including regulated utilities, nonprofit organizations, etc.)

(1) The Exclusive State Agency or Regulated Utility Option

We have eliminated a state agency as the *exclusive* option for the administrative/management function because Section 44(b)(7) of AB 1105 expressly directs us to consider minimizing the role of state agencies in providing administrative . . . services, and we are well aware of the limitations of this option based on our experience managing other public interest programs such as PIER. Similarly, we have eliminated the regulated utilities as the *exclusive* providers of this particular function because many affected parties (including the CPUC) have concluded that the regulated utilities have real or potential conflicts of interest which could prevent them, *as the sole administrators of the program*, from achieving the efficient and effective program administration called for in AB 1105.

(2) The Exclusive Non Profit Corporation Option

Section 44(b)(4) of AB 1105 also specifically directs the Energy Commission to consider designating a public benefit, nonprofit corporation as *the* program administrator. The idea of using a non-profit corporation to administer California's entire PGC Efficiency Program predates AB 1105.

In 1998 the CBEE Efficiency Program presented this option, among others, to the CPUC in its search for an administrative structure that would no longer rely exclusively on utility distribution companies (UDCs) for program administration.²⁵ In addition, nonprofit corporations have been serving as administrators for public goods energy efficiency programs in several other states. For example, in 1998 New York designated an existing, legislatively authorized, nonprofit entity (the New York Energy Research and Development Authority known as NYSERDA), to serve as the statewide administrator for that state's various public goods energy programs,

²⁵ See Reply Comments Of The California Board For Energy Efficiency, dated March 23, 1998, filed in CPUC Proceeding R.94-04-031/I.94-04-032

including its energy efficiency program. In 1996 various public and private entities in the Pacific Northwest region (Washington, Oregon, Idaho and Montana) mutually decided to create a new, nonprofit corporation to administer a portion of that region's PGC Efficiency Programs. With support from the Governors of the region, and without any express legislative authorization, the Northwest Energy Efficiency Alliance was privately established to administer certain PGC Efficiency Programs that cut across state and utility boundaries in the region; however, the region's UDCs continue to run those PGC Efficiency Programs which are most efficiently administered on a local/service territory basis.²⁶

Pros For This Option

There are a number of possible benefits which might result from using a nonprofit corporation to administer California's PGC Efficiency Program in the post-transition period. These potential benefits include the following.

First, a nonprofit corporation could be structured to ensure that its Board of Directors represents a wide range of interested stakeholders, including representatives from affected private industries, ratepayer groups, utilities, policymakers, and others. Such shared administrative decision-making may not be possible if responsibility for program administration is vested primarily in an existing state agency or in the UDCs themselves. Two recent examples of such stakeholder-oriented nonprofit corporations are California's Independent System Operator (ISO) and California's Power Exchange (PX), created pursuant to AB 1890.

Second, a nonprofit organization may be well suited to administer the PGC Efficiency Program in a very effective and efficient manner. For example, a nonprofit entity *may* be able to operate without the restrictions of various laws that constrain state agencies (e.g., the civil service employment system, the Public Contracts Code, the Public Records Act, etc.). Therefore, a nonprofit organization may be able to recruit highly qualified employees from the private sector, and make internal administrative and program contracting decisions with a degree of speed and flexibility that a state agency simply cannot match. **However, as a following portion of this analysis points out, policymakers should be aware that it is *not certain* that a public benefits corporation would, *ipso facto*, be exempt from various state laws that otherwise apply if a public entity administers the program.**

Third, the private sector nature of a nonprofit corporation is likely to be compatible with the long-range sustainable market transformation policy goals of the PGC Efficiency Program itself. Thus, a nonprofit corporation (whose board and employees are drawn, at least in part, from the private sector) may be particularly well equipped to understand and help transform private energy markets, and to cease operations once these specific policy objectives have been achieved.

²⁶ See Ratepayer-Funded Energy Efficiency Programs in a Restructured Electricity Industry: Issues and Options for Regulators and Legislators, (Eto, Goldman and Nadel; Lawrence Berkeley National Laboratory [Publication Number LBNL-41479], May 1998, at pages 43-49).

Cons For This Option

There are several types of problems which could result from deciding to use a nonprofit corporation to administer the PGC Efficiency Program in California, including the following concerns.

First, if a qualified nonprofit organization does not already exist to administer California's PGC Efficiency Program (as was the case with NYSERDA in New York), there will certainly be delays and other start up costs associated with creating, staffing and organizing such a new, nonprofit organization. Among the more obvious start up difficulties will be the challenge of identifying the proper number and mix for the stakeholder board, locating and hiring an executive director and staff, and ensuring that the new organization fully qualifies for federal tax-exempt status under the Internal Revenue Code. None of these particular problems would exist if program administration is assigned to an existing public agency or the regulated utilities.

Second, as mentioned above, it is legally uncertain whether assigning all administration responsibilities for the PGC Efficiency Program to a nonprofit corporation will automatically exempt such an organization from various state laws that would otherwise apply if a state agency were to administer the program instead (e.g., the civil service employment system, the Public Contracts Code, the Public Records Act, etc.). As the U.S. Supreme Court has stated:

When private individuals or groups are endowed by the State with powers or functions governmental in nature, they become agencies or instrumentalities of the State subject to its [legal] limitations.²⁷

Thus, in determining whether state civil service laws contained in Article VII of the California Constitution apply to particular activities performed by nongovernmental entities, the courts have applied what is called a nature of the service test. Under this test, the court inquires as to whether the nature of the contracted service could have been performed by a civil servant. If so, the state must proceed under the civil service mandate.²⁸ However, activities determined to be new state functions not previously performed by state employees have been exempted from this rule.²⁹

Similarly, the California Attorney General's Office has recently issued an opinion concerning a nonprofit corporation created to carry out certain functions of a local redevelopment agency. There, the redevelopment agency created a nonprofit corporation to assist it in administering the agency's housing activities, staffed the nonprofit corporation with the agency's employees, and retained approval power over the corporation's budget. The Attorney General concluded that the redevelopment agency may not circumvent legislative requirements through the device of

²⁷ Evans v Newton, 382 U.S. 296, 299; 86 S. Ct. 486, 488 (1966). *Accord* San Francisco Unified School District v Johnson, 3 Cal.3rd 937; 92 Cal. Rptr. 309 at 318 (1971).

²⁸ Professional Engineers In California Government v Department of Transportation, et al., 13 Cal. App.4th 585; 16 Cal. Rptr.2nd 599 at 603 (1993).

²⁹ California State Employees Association v Williams, 7 Cal. App.3rd 390; 86 Cal Rptr 305 at 313 (1970).

assigning administrative responsibilities to a nonprofit corporation which is subject to its control. When [an] agency is using a nonprofit corporation to carry out its governmental responsibilities, the corporation must comply with acquisition and relocation requirements, and public bidding and prevailing wage statutes.³⁰

In the nonprofit model under consideration for the PGC Efficiency Program, a newly created public benefits corporation would be expressly authorized by statute to design and administer the entire program, consistent with state policies and goals. If such a nonprofit organization were also authorized to (1) receive the public goods funds (which are collected from ratepayers pursuant to Legislative direction), (2) create the selection criteria for passing the funds through to implement the program, and then (3) solicit and award these funds to third parties for program implementation, it might be argued in court that the nonprofit organization is actually performing many, if not all of the functions traditionally reserved to a public agency such as the CPUC or the Energy Commission. At a minimum, this could create some uncertainty as to whether various laws governing state agencies apply or not.³¹

Finally, an important issue of public trust and confidence may arise if too much of the PGC Efficiency Program is administered by a nonprofit corporation, without the traditional governmental safeguards that assure public access, accountability and fairness. The PGC Efficiency Program involves the surcharge and expenditure of a great deal of ratepayer funds (currently over \$200 million annually) to achieve certain public goods that might otherwise be lost in the private market alone. If, in the name of efficiency, too much of the administration of the program is taken out of the public arena, public support for the market transformation goals and activities of the program may dwindle before they have had an adequate chance to succeed.

(3) The Combination Of Entities Option

A third option for dealing with the administrative/management functions of the PGC Efficiency Program assumes that no single type of entity is ideally suited to administer/manage the *entire* program by itself. Instead, a small *combination* of public, private and regulated entities, carefully selected based on their demonstrated abilities in individual program areas, is the preferred option.

This combination option would allow the program to take advantage of unique management expertise which may currently exist in entities other than the regulated utilities (e.g., nonprofit organizations, local government, etc.). It also recognizes that the regulated utilities may be best suited to manage particular areas of the program, and therefore should not be prevented from doing so.

³⁰ 81 Cal.Ops.Atty.Gen. 281 at 291 (August 1998).

³¹ This concern should not be viewed by policy makers as abstract in nature. The current EE Program has already experienced significant delays resulting from efforts by the CBEE (with CPUC approval) to contract out for key administrative services for the existing program. In addition, the recently created ISO and the PX nonprofit corporations have both experienced court challenges (which they withstood) on the types of issues discussed above.

The main problems associated with the combination option are that (i) it may be more difficult to start up than simply assigning this function to a single type of entity, and (ii) it will require additional oversight and coordination between the entities to avoid unnecessary duplication or counter-productive efforts in program administration and management.

(c) Program Implementation Responsibilities

While all types of entities could perform the various activities in this functional category, Section 44(b)(7) of AB 1105 expressly directs the Energy Commission to consider [m]inimizing the role of *state agencies* in providing . . . implementation services. Accordingly, we have determined that there are other types of entities, including local governments, private companies and regulated monopolies, who are well suited to perform the various implementation activities that will be required under this program. Therefore, we have eliminated the Energy Commission entirely from this functional category, but would need to evaluate other state agencies on a case by case basis before deciding to exclude them entirely. All other types of entities would be fully *eligible* to receive PGC Efficiency Program funds for implementation services, provided they otherwise could succeed based on a merit evaluation.

(d) Internal Evaluation Responsibilities

In this functional category, the issue is focussed primarily on whether entities who are performing program administrator and/or implementation functions should be excluded, *ipso facto*, from also performing internal evaluation functions. The exclusion option asserts that to ensure hard-hitting and objective evaluations, the administrative structure must disaggregate the evaluation function from the program administrator and implementation functions. Otherwise, unavoidable conflicts of interest will water down the efficacy of the evaluation process. The non exclusion option asserts that program administrators and implementers have an inherent understanding of the complex programs they re responsible for which an outside evaluator can never duplicate. In addition, outside evaluators may create an adversarial relationship that could be counterproductive to constructive change in the program.

(e) Independent Program Review Responsibilities

No party has identified any serious issues in this functional category. There appears to be a consensus that a periodic independent review of the entire PGC Efficiency Program is both desirable and necessary from a public policy perspective to keep the program on track and fully accountable. We recognize that public entities (such as the Legislative Analyst or the Department of General Services) and private entities (such as the nonprofit Council on Science and Technology or the RAND Corporation) could both perform valuable services in such a periodic independent program review.

4. The Recommended Administrative Structure for the PGC Efficiency Program

(a) Introduction and Summary of Recommendations

We have given full consideration to the key functions, evaluation principles and administrative structure options presented above, as well as to the extensive and thoughtful public input presented on this topic during the various Committee-sponsored forums which preceded this report. We conclude that the following post-transition administrative structure can achieve an efficient and effective administration for the PGC Efficiency Program. While this structure may not be the only way to achieve such results, we are persuaded that its overall merit, on balance, justifies our support for it at this time. We summarize our recommended administrative structure as follow:

Governance and Oversight Functions Responsibilities for this area of the PGC Efficiency Program should be assigned to a statewide governmental entity that is open and fully accountable to members of the public and their duly-elected representatives. The Energy Commission has the requisite expertise to perform this function, and we conclude that for the reasons stated above it should be given responsibility for this function by the Legislature. We are not recommending assignment of this responsibility to a newly-created Energy Efficiency Authority because we are concerned that this cannot be accomplished without unacceptable delays or unnecessary politicization of the PGC Efficiency Program.

Program Design and Administration Functions Responsibilities for this area should not be assigned to any single type of entity alone. Rather, it should be awarded to a small combination of entities (three at a minimum, eight at a maximum). The governance entity should select these program administrators on the basis of merit in administering a major area of the overall PGC Efficiency Program (e.g., sustainable market transformation efforts concerning residential, non residential or new construction markets; target reliability/demand responsiveness efforts; innovative pilot programs, etc.)³² In order to minimize the role of state agencies in providing administrative services, we recommend that the governing authority (e.g., the Energy Commission) be foreclosed from performing this function, but all other types of entities (e.g., local governments, private companies, regulated utilities, etc.) should be eligible for this function.

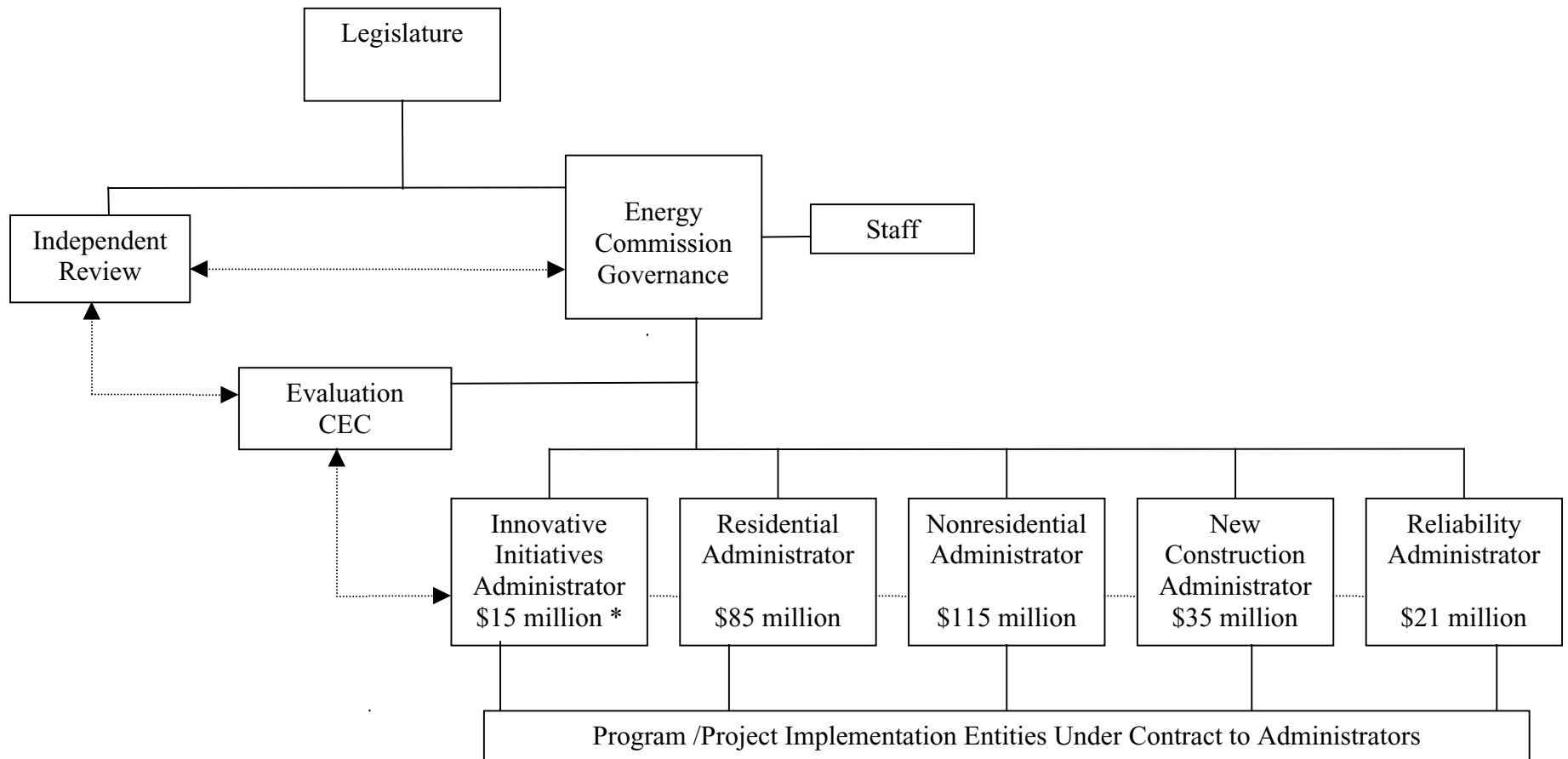
Program Implementation and Delivery Functions The program administrators should assign these responsibilities to a variety of different entities, based on merit. All entity types (other than the governing entity) should be eligible to apply for these implementation responsibilities. However, to avoid any appearance of a conflict, the program administrators should be prohibited from assigning actual implementation responsibilities to their own companies or their affiliates unless there is no other competitive option available.

³² Regarding the possibility of assigning the entire PGC Efficiency Program administration function to a single nonprofit, public benefits corporation, we have concluded that the potential delays, uncertainties and other adverse factors surrounding this option outweigh its potential benefits. However, if this option is to be pursued it should be expressly sanctioned by legislation which spells out clearly what legal obligations apply to this entity and what do not.

Internal Program Evaluation All entities engaged in the management or implementation of the PGC Efficiency Program should be allowed and encouraged to conduct their own internal evaluations of the effectiveness of their efforts. However, to ensure objectivity and effective feedback, we recommend that the governing entity, with assistance from one or more outside entities as needed, conduct its own evaluation of various aspects of the program, and use this information as feedback for program administrators and implementers, as a basis for adjusting the program's goals and direction over time, and as a factor in determining appropriate compensation levels for the program administrators.

Independent Program Review We recommend that an independent review of the entire PGC Efficiency Program be conducted by a qualified public and/or private entity, with final results provided to the Legislature and Governor every four (4) years, and interim results provided to the program participants every two (2) years.

With this summary in mind, we now offer a more detailed discussion of our recommended administrative structure, as depicted visually in the attached organizational chart.



———— Reporting Relationship
 <----- Feedback Relationship

The dollar amounts are only estimates. Final allocations will be set during the strategic planning process.
 * Funding for innovative local programs is included within the allocations for the three market sectors in the report text.

(b) Discussion Of The Recommended Administrative Structure

In recommending an administrative structure for the post-transition PGC Efficiency Program, we have been mindful of the various evaluation principles discussed earlier in this report. Among other things, a smooth transition for current program efforts is of very great concern. Accordingly, our recommended administrative structure expressly seeks to utilize current entities with existing skills in the administration and implementation of energy efficiency programs (e.g., the regulated utilities), while concurrently encouraging the introduction of new program concepts and the entry of new participants into the administrator/manager, implementers and evaluator roles.

(1) Role of The Regulated Utilities In The Recommended Administrative Structure

- Advantages In Retaining A Utility Role As Program Administration

California's electric utility distribution companies (UDCs) have administered efficiency programs prior to industry restructuring, and have continued to do so since the change. The UDCs have a number strengths, or assets, built up over time, while conducting activities that ratepayers have funded. These strengths include extensive experience administering energy efficiency programs; customer trust (especially among the classes of smaller customers, residential and small commercial); familiarity with, and data on, customer energy use patterns (especially with larger customers); and nationwide contacts with equipment suppliers, efficiency consultants and national efficiency advocacy groups.

These advantages give the UDCs advantages over other entities as a choice for program administrators. It also potentially makes them formidable competitors for such contracts if these functions are put out to bid.

- Disadvantages In Retaining A Utility Role As Program Administration

There are also a number of potential drawbacks in retaining the UDCs as program administrators. The first of these drawbacks is the actual or perceived conflict of interest utilities face, as suppliers of electricity. The goal of the PGC Efficiency Program is to promote energy efficiency and develop markets for efficiency. Meanwhile, as the CPUC pointed out in D.97-02-014, electric utilities are entering a period where their interest in increasing sales volumes has never been greater. While these comments refer specifically to the AB 1890 transition period, future incentives for utilities continue to include increasing energy sales.

A second potential drawback to utility management is the utilities' interest in retaining customers, who might contract with other energy service providers (ESPs). This interest is especially strong among customers who are large energy users, and have options to switch to competitors. As the CPUC also noted in D.97-02-014:

This environment does not give utilities any motivation, and in fact, provides greater disincentives than in the past, to develop an independent industry which will directly compete with the energy services they provideWith the enactment of AB 1890, utilities are motivated to promote their own relationship with customers, rather than that of their competitors in the private market.

Allowing the UDCs to administer efficiency programs in the nonresidential market area potentially allows these companies to use program funds for customer retention efforts. While these activities probably reflect good customer service, they also can have the effect of providing competitive advantage to the UDC.

A third potential drawback to continued utility administrative responsibilities results from the lack of competition currently faced by the UDCs for these responsibilities. There is not a clear accounting of administrative, or overhead, costs in the current PGC Efficiency Program programs. Competitive solicitation of contractors would help to insure that public funds are being used most efficiently to accomplish a goal, both in low cost operation of the program, and avoiding excessive profit to the contractor. The utilities have never bid competitively for efficiency program responsibilities. The regulatory arrangement they have with the CPUC is that their costs are reimbursed, and they receive performance incentives for program successes. The CPUC itself has noted:

The absence of competition for administrative services requires that the Commission continue to evaluate the appropriateness of performance incentives for interim utility administrators and, if continued to be found appropriate, the incentive level and performance basis.

If the utilities were to bid against other entities for the program administrator roles, this conflict would be resolved. That is not necessarily the case for the other complications of utility involvement mentioned above.

- Recommendations Regarding The UDCs Role As Program Administrators

In R.98-07-037 the CPUC concluded that it was unwilling to continue *exclusive* utility administration of energy efficiency programs beyond 2001. We understand the CPUC's concerns and share them. However, we believe that in some instances it may be possible to mitigate some of the UDCs' conflicts. We also note that, at least for the initial period of the post-transition governance period, the UDCs' experience, customer trust and supplier network can provide valuable continuity for the PGC Efficiency Program. These are assets that ratepayers have purchased over the years of utility program operation and administration, and the new governing entity will have to determine how best to preserve these assets, while minimizing the UDC liabilities that exist.

- Initially, we note that the greatest advantages to utility participation are with small customers, such as residential. UDCs also have useful credibility and experience working with small commercial entities, including those in the building industry. The

greatest conflicts in utility administration occur with large commercial customers. This is the customer class that has the greatest opportunity to provide a competitive market for energy services. Continued utility responsibility for efficiency programs among these customers poses a threat to this market developing. Therefore, we believe that the best use of utility assets is in the residential and new construction markets. The conflicts inherent in the commercial market make utility administration of programs in that area much less desirable. The nonresidential market should not have utility management.

We believe that certain program areas would operate best on a statewide basis, especially for market transformation purposes. If an entire market sector is to be managed by a UDC, the utility performing the management functions should perform it statewide, as would any other entity winning the contract.

In light of the foregoing comments, we specifically recommend that the governing entity solicit proposals from the existing UDCs to manage certain energy efficiency programs, at the statewide level, in three of the five program areas previously identified elsewhere in this report. These program areas are:

- Residential Programs
- New Construction Programs
- Targeted Reliability/Demand Responsiveness Programs³³

The Energy Commission should award such contracts in these program areas exclusively to the UDCs for the years 2002 and 2003 *unless*, in a separate hearing or proceeding, parties convincingly demonstrate that reserving one or more of these market sectors for the UDCs to manage on an interim basis is not in the public interest. Under this proposal, the governing entity would review the UDC proposals based on their merits during the year 2000-2001. Selected UDC proposals would be turned into contracts effective for the calendar years 2002 and 2003.

However, the governing entity should reserve the right to competitively bid the program management function for all of these market sector and program types if the UDCs do not provide competitive proposals that make a compelling case related to their competency to manage the programs or fail to identify steps the UDCs will take on a proactive basis to minimize any potential conflicts of interest with their parent companies' desire to maximize profits from the sales of more energy. If insufficient or inadequate proposals are submitted, the governing entity should proceed to put all or some of these market sectors out for competitive bid instead.

³³ Reliability programs would be designed to reduce peak demand in the short term in specific geographic areas identified by the Independent System Operator (ISO) or others as constrained areas likely to produce either high peak prices or reliability problems.

In the fourth quarter of 2003 the Energy Commission could either opt to renew these UDC contracts if the utilities have performed well, or opt to put these program administrative functions for some or all of these three sectors out to bid. This decision should be based on both experience gained with the existing UDC administrators, and the experience gained during the transition period in selecting and managing program managers based on a competitive bid process.

The UDCs should not be eligible to bid to become managers in the other key areas of the PGC Efficiency Program (i.e., the nonresidential market sector and the innovative market programs sectors). This is because of concerns raised by various parties about the use of energy efficiency programs as a customer retention tool in the nonresidential sector, as well as our desire to foster innovation at the local and regional levels through a competitive bidding process unburdened by the existing advantages held by the incumbent UDCs over new market entrants.

Rationale for this proposal: We believe this proposal is responsive to comments made by parties during this proceeding to consider ways to use the considerable expertise of the existing UDC administrators as an evolutionary step towards full competition while the infrastructure and necessary changes in contract procedures are developed and tested in the new administrative system. This approach reduces the risk of disruptions and/or delays that may result from trying to *competitively bid* out the program administrative responsibilities for the *entire* PGC Efficiency Program during the first year following the transition. Instead we propose to phase in the new competitive administrative system by putting a portion (e.g., 20 to 50%) but not all of the program administrative functions out to bid for the first two years of the post transition (i.e., 2002-2003), while aiming to put all of the program management functions out for bid for the years thereafter. This approach will allow the governing entity to learn from its first two years of experience in selecting and managing program managers and improve upon the system before putting all of the market sectors out to bid thereafter.

[Note to readers of this draft report] We suggest that parties who wish to comment on the merits of the recommendation above focus on responding to the following questions at the hearing on November 16th.

1. Do the current utility administrators possess core competencies, unique skills or unique access to data in some or all of these markets that could not be obtained through a competitive bid process?
2. What steps or actions if any could be taken voluntarily by the existing program administrators to mitigate any potential conflicts of interest they may face if chosen to be administrators in one of the market areas in staff's proposal?
3. Would pursuit of this option (to set aside three program areas for competition between utilities only) mitigate or increase the risk of a program hiatus resulting from the full or partial failure of the proposed new governance structure to select and procure new program administrators for all of the proposed market sectors before the end of 2001 and without legal protest?

(2) Other Attributes Of The Recommended Administrative Structure

The Administrative Structure which we are recommending is intended to operate in a flexible manner that will allow the PGC Efficiency Program to evolve over time. It will make use of competitive selection processes to ensure assignments based on merit wherever possible. Local governments, regional agencies, for profit and nonprofit companies, as well as the utilities themselves, all have great potential to contribute to this program, and accordingly should be eligible to participate as program administrators and/or implementers.

It is also clear that effective checks and balances require that certain program functions not be conducted by the same organization. Accordingly, our recommended structure separates broad policy-setting functions from the program administrator and program implementation functions; ensures that responsibility for program evaluation is appropriately disaggregated from program management and implementation; and provides for a periodic independent review of the entire program.

The following paragraphs provide a further explanation of the recommended administrative structure.

(a) Governance and Oversight

The California Energy Commission will provide overall policy direction and guidance for the PGC Efficiency Program. The governance function will include the preparation and adoption of a strategic plan that prescribes the mission, goals and objectives of the program, and provides a policy basis for resource allocation and program evaluation. Annual or biennial action plans will be developed based upon the strategic plan to address the specific needs of the various energy efficiency markets and customers. The governing authority will determine funding allocations for the PGC Efficiency Program based on the strategic plan and the annual or biennial assessment of program requirements. Periodic budget reviews will allow for revisions of funding allocations and administrative structure in response to changing market conditions, price trends or societal goals. To assist in these governing efforts, we recommend that the governing entity create and receive input from a high-level advisory panel comprised of knowledgeable individuals representing a variety of affected interests.

An organizational unit within the California Energy Commission will provide staff support for the governance and oversight function. This staffing effort will provide needed support in preparing the strategic plan and related documents, as well as the services required to select and oversee the three to eight program administrators discussed elsewhere in this report. The California Energy Commission staff will be aided by a technical support contract that allows for the acquisition of specific skills on an as needed basis.

Enabling legislation for the PGC Efficiency Program should contain express provisions to ensure the governing agency can conduct its functions in a reasonably streamlined

manner (e.g., apply appropriate contracting and administrative efficiency provisions pertaining to the PIER and Renewables Programs to the PGC Efficiency Program as well). In addition, the governing entity must structure itself *internally* to ensure that its functions are carried out in a timely and effective manner (e.g., assign a high-level, full-time staff manager and dedicated staff to this effort). The California Energy Commission has gained valuable experience in administering the PIER and the Renewables Programs, and an Independent Panel is in the process of evaluating the PIER Program and suggesting additional changes that would make that program operate better. The governing entity must apply knowledge such as this to the PGC Efficiency Program.

(b) Program Design and Management

Prior to 2002, the governing agency should select several different entities (not more than eight) who will be responsible for program design and management functions in specified program areas. Each program administrator contract will have a multi-year duration, with evaluations providing the basis for additional incentive payments and/or contract renewals. Initially, three major program area categories are proposed for the post-transition period: (i) market sector programs; (ii) reliability/demand responsiveness programs; and (iii) pilot scale initiatives. We expect that as the process matures, an increasing percentage of total PGC Efficiency Program funds will be allocated to the market sector program category. Descriptions of each of these major PGC Efficiency Program areas follows:

- *Market Sector Programs*

Market sector programs will be administered by different entities, each responsible for market sector portfolios in one of three broad areas, e.g., non-residential, residential, and new construction. Each market sector manager will be responsible for designing portfolios of mutually reinforcing programs or pilot projects designed to meet clearly defined market objectives. For example, the residential market sector could have portfolios of programs addressing market objectives in the areas of lighting, heating and cooling systems, and appliances. A portfolio manager working directly with the market sector manager will manage each portfolio of multiple programs or pilot projects. The residential and new construction market program areas would, initially, be reserved for qualified UDCs during the first two years of the post-transition period, and thereafter could be competitively bid by other types of entities in addition to the UDCs. The nonresidential market sector manager roles would be open to competitive bids by to all types of entities, including the UDCs, from the inception of the post-transition period.

The market sector managers will be responsible for all of the functions described earlier under Program Administration Functions. They are accountable for how the portfolios as a whole are performing within the market. Portfolio managers are responsible for following sound portfolio management principles, such as: 1) selecting programs that reinforce one another toward an objective, 2) selecting a mix of programs that reduces ratepayer risk, 3) allocating portfolio budgets between various programs and projects; 4) not committing large sums to untested (e.g., riskier) programs, 5) monitoring portfolio

and program performance through market assessment and evaluation feedback, and 6) weeding out poorly performing programs.

- *Reliability/Demand Responsiveness Programs*

This program are will allocate PGC Efficiency Program funds for the specific purpose of achieving near-term demand responsiveness which will improve system reliability in targeted areas of concern. Management of this program area will be reserved for qualified UDCs during the first two years of the post-transition period, and thereafter all types of entities could competitively bid for this area of responsibility.

- *Innovative Pilot Scale Initiatives*

This major program category will allocate funds specifically for innovative local/regional initiatives, and other programs conducted on a pilot scale. It will provide an opportunity for innovation and incubation of new ideas in non-traditional program areas through pilot testing and non-adversarial evaluation feedback. Local governments and other parties (e.g., private firms, academic institutions, trade associations, non-profits, municipal utilities or other state agencies) will be encouraged to develop new creative ideas for market objectives which are not currently being met by the other major programs areas. This program area will also provide opportunities to target hard-to-reach customers through local or regional public-private collaboratives. For example, collaboration between industry, a utility and a state agency may be able to develop an effective strategy for multi-family complexes.

The management position for this program area will be open only to non-UDC bidders. UDCs may serve as implementers within this program area only in collaboration with local or regional entities in this category. In addition to the functions described earlier in the Program Administration Functions section, the manager for this program area will be responsible for creating an effective externally focused competitive solicitation process and coordinating with other market sector managers and the program evaluation effort in using market assessment information.

(c) Program Implementation and Delivery

Program implementation is clearly distinct from program administrator, and will continue to be largely outsourced by the program administrators to a variety of implementers on a competitive basis. However, program administrators should be prohibited from assigning program implementation efforts to their own companies or affiliates unless no other competitive option is available.

(d) Internal Evaluation

The governing authority will have primary responsibility for the internal program evaluation including (i) individual programs/projects, (ii) the market-focused portfolios of programs, and (iii) the program administrators. Since there is a potential conflict of

interest between conducting the program evaluation function while also conducting program administrator and implementation functions, the entity primarily responsible for internal evaluations should not conduct these other functions at all.

The first two types of evaluation (individual program/projects and portfolios of programs) would be performed by consultants working as part of a team with program managers to facilitate a non-adversarial review of their programs and portfolios. The purpose of the review will be to identify ways to improve program performance rather than evaluate the effectiveness of the program administrator. The governing authority will accomplish this work through contractual arrangements with evaluation consulting firms. Having firms specialize in particular market sectors may help accelerate market learning and promote overall coordination with other public benefit programs such as the PIER Program. Evaluators will be responsible for effectively communicating their findings to relevant portfolio managers and program implementers. However, the evaluation structure also must be flexible enough to allow administrators and implementers to perform additional evaluation activities, such as market assessment, that they see as particularly helpful in designing their portfolios.

The third type of evaluation effort focuses on the program administrators themselves. Payment of these managers will not depend on the results from any single program evaluation, but rather on the overall performance of the portfolio of programs for which each program administrator is responsible. Consequently, periodic reviews and audits of these managers will address a very different set of questions. Among these would be questions such as (i) responsiveness to policy directions; (ii) responsiveness to evaluative feedback; (iii) comprehensiveness of portfolio(s); (iv) willingness to take risks and innovate in order to address market objectives; and (v) control of overhead costs and portfolio results. These evaluation efforts are more likely to be conducted by major management auditing firms than by energy efficiency evaluation firms. These reviews of program administrators may become the basis for renegotiating new contracts, address the need for improved performance, or in the worst case, be the basis for a process of termination for failure to perform.

As part of its evaluation responsibility, the governing authority will need to develop a set of guidelines (e.g., a standard practice manual) on how the success or failure of market transformation programs will be determined. The manual will be prepared by the end of the year 2000.

(e) Independent Program Review

An independent program review panel should be appointed jointly by the Legislature and governing authority. This panel will meet periodically, and every four years provide an independent analyses to the governing authority and the Legislature regarding the overall performance of the PGC Efficiency Program. This review will be at a high level concentrating on the effectiveness of the overall governance and administrative structure, including the evaluation process. Shared membership with the PIER independent panel

may be an additional means of establishing synergy between these public benefit programs.

(3) Conclusions Regarding The Recommended Administrative Structure

The administrative structure which we recommend addresses all of the necessary functions for the PGC Efficiency Program. It satisfies most, if not all of the evaluation criteria listed earlier in this report. In assessing our recommendation, it is particularly important to recognize that the various parts of this structure are expressly designed and intended to compliment each other, and to thus assure efficient and effective administration for this program.

II. Transition Plan Report

The Transition Plan Report discusses what the staff believes needs to be done in the two year period, January 1, 2000 to December 31 2001, to transfer oversight and management of the PGC Program from the CPUC/CBPGC Efficiency Program to the new governance entity proposed by the staff.

A. Oversight and Responsibility Issues

Sec. 44(a)(1) in AB 1105 asks the Energy Commission to discuss [i]ssues associated with oversight responsibility, including those associated with the transfer of the responsibility from the Public Utility Commission to the State Energy Resources and Conservation and Development Commmission. In this section of the report, the staff lays out those responsibilities.

Energy Commission Responsibilities

During the transition period, the CPUC will continue to govern the program. The Energy Commission should participate in CPUC processes related to the program, while planning for the post transition work.

The Energy Commission should undertake a number of activities during the transition period. These include:

1. Establishing a strategic plan to guide decision-making,
2. Evaluating the existing status of efficiency efforts to guide allocation of future program resources,
3. Developing enabling legislation to transfer the program, provide appropriate administrative flexibility, and establish an independent auditing and program oversight function,
4. Establish the Program administrative structure.
5. Develop and implement a competitive contracting process for which the electric UDCs are exclusively eligible, and
6. Designing and implementing a competitive solicitation/contracting process to hire firms providing program administration and management.

Staff anticipates the transition generally progressing along the following schedule. Further detail of the elements of the transition effort are detailed below the schedule.

Anticipated Transition Plan Schedule

Milestone	Date
1. Develop Draft Legislation	February - April 2000
2. Develop Strategic Plan and Program Guidelines. Conduct Market Analysis	March - October 2000
3. Develop Solicitation Process for Market Area Administrators	July — October 2000
4. Develop Solicitation Documents and Start Solicitation	November 2000
5. Release of two stage RFP s for program managers	December 2000
6. Release of one stage RFP s, development of charter for nonprofit and or writing sole source contracts for program administrators	January 2001- April 1,2001
7. Develop and release Evaluation RFP and Selection of Evaluation contractors	March - August 2001
8. Formation of Independent Review Panel	Late 2001
9. Program Handoff Period- Old to New	September — December 2001
10. Program Roll out	January 1,2002

1. Strategic Plan

During the transition period, the Energy Commission should complete a strategic plan for the public goods charge efficiency program. This plan should include both the principles and goals that should guide program efforts. The Strategic Plan should include a procedures manual delineating how the programs should be evaluated, the types of results that constitute program benefits and how those results are quantified. The goal of the updated manual should be to ensure that market transformation impacts are included as program benefits, and are measurable to ensure program performance. The manual should help ensure that consistent, defensible evaluation methods are used among various program activities. The Energy Commission is especially interested in seeing that the impacts of these programs on the market are measured, and valued where possible, to ensure cost-beneficial operation.

The planning process used to develop the strategic plan should be an open, public process. Initial workshops should be staff-sponsored, with Committee-sponsored events following.

2. Existing Program Status

The Energy Commission should conduct a process to determine the status of programs in each market area. The information developed should include estimates of the amount of energy efficiency that can still be realized in each market (residential, nonresidential and new construction), and more specific information on where the opportunities in each

market lie. This process should include review of the effectiveness of current programs. Local program opportunities should be covered, providing the initial opportunity to design guidelines for local and regional initiatives.

The Energy Commission can use this information in allocating program funding between markets. The information should also be available to entities bidding to be administrators in each program area. This should be useful to them in designing proposals, and to the Commission in proposal evaluation.

3. Enabling Legislation: Program Structure and Administration

Through legislation, the Energy Commission should establish a program structure and administrative procedures for this program designed to overcome perceived issues with state administration. Resources committed to the program should be administrative structure. This includes proposing legislation, developing a responsible contracting process, promulgating administrative guidelines, and ensuring that adequate resources are available. The goals of the transition administrative activities should be:

1. To ensure that there is as little disruption to program activities as possible;
2. To ensure that there is an adaptable and responsive process to develop and revise administrative systems, which provides the flexibility necessary to allow private sector creativity, and provide program and fiscal review to ensure responsible use of public funds;
3. To introduce competition into the program where it will enhance program benefits for the public; and
4. To avoid the excessive use of government resources to oversee program operations and to avoid unnecessary intrusion into program operations and management.

1. Program Funding

We recommend that legislation should establish a PGC Efficiency Program trust account in the State Treasury for program funds. Utilities should continue to collect funds for the efficiency program, remitting the funds into the trust account quarterly. The legislation should recommend that funds for program operations be appropriated continuously. Standard contract provisions call for contract funds to be encumbered within one year, and liquidated within two years. For ongoing program operations, in which contractors administer program activities, this is not appropriate. Continuity in the programs requires a longer period of time for both encumbrance and liquidation. Continuous appropriations should help alleviate that problem. Annual appropriations should be used to fund state administration expenses. This provides the Legislature an opportunity to review the costs of state activities.

2. Administrative Flexibility

The recommended enabling legislation should include appropriate exemptions from the Administrative Procedures Act and the Public Contracts Code. The purpose of these changes is to focus more of the Energy Commission's contract management efforts on contractor results, and less on overseeing activities. Market area administrators must have flexibility to modify their program designs and portfolios to obtain results. Much of what the market administrators should do is new, and involves innovation. The contracting process must support these efforts, if we are to develop effective program approaches.

As in the Renewable Resources Program, these exemptions can allow the Energy Commission to develop more flexible administrative approaches to program contracts and operations. The Energy Commission has had success in using more flexible approaches in administering the public goods charge renewable resources funds. SB 90 (1997) was the vehicle for a number of changes in the use of state administrative practices, that gave the Energy Commission needed flexibility. While that program differs somewhat from the Efficiency Program, the changes included in that bill provide a template for the modifications the Energy Commission should seek for efficiency. For example, Public Utilities Code section 383.5(f) 1-3 establishes the use of guidelines to establish the program design and implement it. For the Efficiency Program, the Energy Commission may use this flexibility for multi-stage negotiated solicitations, allowing comparison of proposals with different activities and impacts. These efforts should be hybrids between the Request for Proposal (RFP) and Request for Qualifications (RFQ) processes. This allows us to avoid the problem of inflexibility that the RFP process introduces. The Energy Commission should also have more discretion in the use of sole source contracts, where they are appropriate. The legislation should still require the Energy Commission to consult with the Department of General Services in these cases, to ensure a check on reasonableness. This flexibility, matched by internal changes to centralize contracting management, should significantly speed up the process of hiring contractors.

The changes should simplify the Energy Commission focusing on outcomes of contracts. Rather than focusing on contractor procedures and interim expenses, the process should focus on the outcomes or benefits that result of the contractors' activities. The Energy Commission should review its options for providing incentives to contractors for program performance exceeding the contract agreements. The Energy Commission should still have procedures to ensure that contractors select and deal with subcontractors fairly. The Energy Commission should also be responsible for funds being used efficiently, through specifying contract end results. However, the oversight of day-to-day activities should be minimized. The Energy Commission should provide an appeals process for subcontractors or others who have a grievance.

The Energy Commission should hire contractors, as appropriate, to provide technical assistance during the planning period.

3. Independent Auditing and Program Oversight

At the same time as it seeks flexibility, it is the Energy Commission's responsibility to ensure that public funds are protected and used effectively. In return for the added flexibility provided by exemptions from state contract procedures, the Energy Commission should propose oversight functions to ensure that it meets its responsibilities.

SB 90 (1997) included provisions for both the Public Interest Energy Research Program (PIER) and the renewable resources program that improved program oversight and reporting. The Energy Commission should recommend a blend of similar requirements for the Efficiency Program. Public Utilities Code section 445(h) calls for an annual audit of program funds by the State Department of Finance. Public Utilities Code section 383.5 (g) requires annual renewables program reporting to the Legislature. Section 445(h) calls for an annual audit of renewables program funds. The enabling legislation should propose similar provisions for the efficiency program. Public Resources Code section 25620.9(a-b) establishes an independent panel to review operation of the PIER program. The enabling legislation should include a similar proposal for the efficiency program.

In the Renewable Resources and Public Interest Electricity Research programs, these types of oversight are proving to be very valuable. They provide oversight of program activities and identify opportunities to improve program performance.

4. Program Administrative Structure

Comments that the Energy Commission has received from the PIER Independent Panel confirm that establishing a program manager, responsible for program functions, and an appropriate administrative structure are key elements in program success.

The Energy Commission should assign staff dedicated to this program alone. The project manager should be responsible for working closely with the Energy Commission's Efficiency Committee, or any successor, on policy issues, while reporting to the Deputy Director on administrative matters.

The dedicated staffing for the program should include an analytic staff, an attorney and one or more administrative staff members. The goal of the organizational structure is to handle as many program functions within the program organization as possible. This simplifies coordination, and speeds up the processes of developing administrative guidelines, and implementing them. This structure makes the most of contracting flexibility, and reduces the time necessary for the process.

The internal structure to formally acknowledge this arrangement would have to wait until FY 00-01. However, the Executive Director, with Energy Commission consent, could establish the structure informally, to be functioning early in 2000.

5. and 6. Contracting Processes

The Energy Commission should develop the contracting process for both open bidding for market area administrator roles. It should also develop the process for bidding among Utility Distribution Companies, for contracts in which they are exclusively eligible. We describe the goals of the contracting processes above. The contracts should be timed to ensure as smooth a transition of program responsibilities as possible. This effort would be staff-intensive for the second and third quarters of FY00-01

B. Transitional Coordination Among Existing Programs

During the transition period, the CPUC is continuing to govern the PGC Efficiency Programs that the regulated utilities are administering. It is incumbent on the Energy Commission to work toward coordinating that program with the PGC-funded PIER Program, and the renewables program. To accomplish this, Energy Commission staff should continue to participate in CBPGC Efficiency Program and CPUC proceedings related to the efficiency program. Staff members are currently participating both on CBPGC Efficiency Program and its Technical Advisory Committee. The Energy Commission and staff provide comments and testimony before the CPUC on efficiency program issues.

The CBPGC Efficiency Program has been moving forward in working to coordinate their efforts with new technologies developed through PIER. They have established a committee dealing with new technologies. We are hopeful that this will assist the products of the PGC research and development funding to begin finding markets to provide benefits to ratepayers.

The Energy Commission should begin to focus its participation in the CPUC's efficiency proceedings more in the direction of facilitating the program transition. The California Energy Commission should propose changes to existing program operations or administration that would simplify the transition where it can.

The Energy Commission should also rely on the CPUC to ensure that the Utility Distribution Companies to provide necessary information regarding program activities, effectiveness, and customer energy use patterns (where confidentiality issues are not involved). The Energy Commission may have to rely on the CPUC for this assistance even after the transition.

The Energy Commission should encourage the CPUC to participate in the transition process. That agency has developed extensive experience in the management of efficiency programs. We believe that the knowledge and experience of the CPUC would be valuable in developing an effective future program.

C. Implementing and Sequencing Issues

1. Strategic Planning

The Energy Commission should begin the strategic planning process for the efficiency program immediately. This work should include the public process to refine program goals, development of a Standard Practice manual for program planning and evaluation and review of existing programs. The Energy Commission, through the Resources Agency, should propose enabling legislation in early 2000. Additional resources could not be available until the beginning of the FY 00-01. As a result, the Energy Commission would have to absorb the initial planning work by postponing other efforts.

2. Current Market Analysis

The Energy Commission should begin analysis of opportunities for improving energy efficiency on a sector-by-sector basis. This work should begin in the first quarter of calendar year 2000 and be complete by late 2000, providing the basis for funding allocation decisions. This schedule coincides with the stage of contract document development, at which contract size must be established.

The Energy Commission should begin to develop the contractor solicitation process in the second half of 2000. This work should include developing a solicitation process that meets program needs, with associated documents. Staff anticipates that the public solicitation can begin at the end of the first quarter of 2001, with contractors selected by the middle of the year. The contracts should go into effect four or five months before the end of the transition.

3. Contracting Processes

The Energy Commission should begin developing the contract solicitation process and documents in third quarter of 2000. For two stage solicitations, the initial documents should be available early in the first quarter of 2001. For solicitations requiring one step, documents should be available by late April 2001. All contracts for program administration should be signed and in effect by September 2001.

The Energy Commission should enter into a technical services contract to assist in the planning and contracting process. This should reduce the need for additional staff during the transition period. The solicitation for that contract should begin in early 2000. The contract should be signed and in effect the second or third quarter of 2000.

D. Resource Requirements

The Energy Commission should dedicate additional staff and funding immediately to begin planning and administrative preparations. The first opportunity to receive additional resources is at the start of FY 00-01. Therefore, the Energy Commission must

conduct the first six months of effort with existing resources. The Energy Commission would need \$200,000 to \$300,000 for technical service support contracts. The Energy Commission should also provide about 12 positions, to provide planning, administrative, legal and contract development assistance. These positions should be dedicated, as far as possible, to the PGC program, to ensure that the incumbents' time is not used in other Energy Commission efforts. The Energy Commission does not have adequate staff in some specialized areas, particularly administrative procedures and legal, to dedicate staff members to this project.

The staff required to support the recommended transition effort includes an attorney and a contract officer as well as one other staff person, well-versed in financial and administrative processes. Six positions would be administrative/analytic staff (including one supervisor), to handle the strategic planning, the market assessment work, and development of the contract documents. Two positions would be technical/data analysis staff to focus on data available for evaluating existing programs and market assessment. One support staff position would be necessary for the transition effort to function effectively. Because positions are not filled immediately on July 1 of the new fiscal year, this program would continue to draw resources from other Energy Commission activities into the next fiscal year.

The Energy Commission could probably permanently redirect a few analytic positions to the program. However, the Energy Commission should need at least ten new positions. The Energy Commission should seek to establish these positions administratively. PGC Efficiency funds, transferred to the Trust Fund beginning in July, could fund the positions in the next fiscal year.

The Energy Commission would need an additional 15 positions beginning in FY 01- 02. These staff should be responsible for contracting with program administrators and utilities, program evaluation contracting and direct evaluation activities, monitoring contracting and direct program services, contract invoice processing and solicitation and contracting for pilot programs.

Over time, it should be possible for some Energy Commission efficiency programs serving specialized customers to be transitioned into the PGC Program. Currently it is too difficult to coordinate public agency and school programs with the PGC program to allow the Energy Commission to rely on PGC activities to provide appropriate services. With the new organization, PGC program administrator contracts can provide for PGC funding for most, if not all, of the current activities to receive PGC support.

The existing Energy Commission program staff is becoming more involved in efficiency improvements for proposed new State buildings. This is currently straining resources. The longer-term change in the role of PGC funding may free up California Energy Commission resources to play a larger role in supporting the State's efforts to ensure that new buildings are efficient and green .

E. Personnel and Fiscal Transactions Required

The additional responsibilities, beginning on January 1, 2000, for the Energy Commission's Administration Division could be significant. This would require postponement of some planned activities. The Planning Unit within the Efficiency Division is wholly dedicated to this project. The Demand Analysis Office might have to postpone some work on energy market analyses, in order to accommodate the program planning efforts.

Administrative support during the early stages of this process would be most difficult to acquire. The Energy Commission does not have experienced administrative staff with low priority projects. The tradeoffs with needs of other Energy Commission responsibilities would be most difficult to resolve, as administrative staff members are dedicated to the PGC Efficiency program.

In order to conduct the program planning and administrative tasks required for a successful program transition, the Energy Commission would need PGC program funds beginning in the FY 00-01. During the first fiscal year of the transition, the Energy Commission's efforts would need about \$1 million to conduct the work. During the early part of the fiscal year, the Energy Commission should be able to determine whether the startup costs in FY 01-02 should be similar, and how those costs should be handled with program startup.